

national

SAFETY NEWS

MAY 1953



SUMMER HAZARD

THIS MONTH

Safety's Base in Morocco

"I'm Sick of the Three E's"

Practical Aspects of Dust Suppression

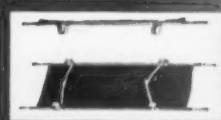
How to make ***SAFETY the Center of Attention*** with an M-S-A Equipped Central Safety Station



M.S.A.

"ALL-SERVICE" MASK

Proved breathing protection against smoke, poisonous vapors and gases (including carbon monoxide)—single use in combination. "All-Visor" Facepiece, Clearone Speaking Diaphragm for voice communication between mask wearers.



M.S.A. STRETCHER

Folds into a compact unit for easy storage in station; is quickly opened to form comfortable litter for carrying the injured. Rugged construction; locking cross braces keep stretcher rigid when in use.



M.S.A. ONE-PIECE ASBESTOS PROTECTIVE SUIT

Complete suit is strongly sewed together as one unit, with gloves and boots attached. Type K hood guard in hood protects head. Heat-resistant glass window in hood permits wide vision.



M.S.A. CHEMOX

Makes its own oxygen from replaceable chemical canister as wearer breathes; gives complete breathing protection in any gas, vapor, oxygen-deficient atmosphere. Clearone Speaking Diaphragm permits clear speech between mask wearers.



M.S.A.

FIRE BLANKET

Instant protection whenever fire may set worker's clothes aflame. Assures rapid head-to-foot coverage. Quick pull of rope opens door—blanket moves forward, unfolding as user spins into its protection.



In General Electric Company's Chemical Division plant at Schenectady, N. Y., the far-seeing safety program stresses preparedness.

One unique example is this central safety station. Instead of spotting safety equipment in many different, hard-to-remember places, GE safety engineers grouped all major emergency safety devices for each section in one location. They used a background of bright green paint, large signs and lettering, and red and white equip-

ment boxes to identify the station—dramatize the location to employees. As one worker put it, "If you got eyes, you can't miss it!" Similar stations are planned for other plants of the company's Chemical Division.

M.S.A. equipment was used to stock the station. The items, described above, were selected to handle practically any emergency resulting from the operation involved. Our bulletins give complete details on this safety equipment. Write for them today.



MSA

SAFETY EQUIPMENT HEADQUARTERS

Call the M.S.A. man on your every safety problem . .
his job is to help you

MINE SAFETY APPLIANCES COMPANY

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**with strong,
lightweight
nylon
eye cups**



*Fit easily over modern prescription
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NOTICE THE RIGID METAL TOP BAR

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They offer many benefits to workers in hazardous occupations—

improved design . . . provides snug, comfortable fit—ample room over modern large-frame prescription glasses.

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standard lenses . . . 50 mm. round flat Super-Tough* lenses used eliminate need to stock odd size replacement lenses—external lens retaining ring makes lens replacement quick and easy.

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new lightweight comfort . . . total weight of these new goggles is practically the same as smaller "cover all" styles.

More Than 300 Safety Products

Carry This Famous Trademark



WILLSON PRODUCTS, INC.

• **205 Washington Street**

• **Reading, Pennsylvania**

National Safety News, May, 1953

national
Vol. 47, No. 5
SAFETY NEWS
Published monthly by National Safety Council
MAY 1953

THE COVER: Cloud to earth and cloud to cloud lightning were caught by the photographer in the same picture. (Courtesy the Weather Bureau and Charles A. Libby & Son.)

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HOME OFFICE
425 North Michigan Ave.
Chicago 11, Illinois

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800 Chrysler Building
New York 17, N. Y.

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FELIX B. STREYCKMANS,

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now-cooler than ever
with breezy **mesh lining!**



ORDER
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This is the cool style every man wants for Summer comfort — on the job and off. He'll make it a **SAFETY shoe** if you display this attractive Lehigh style **NOW!** Last year it was a sellout and we had to disappoint some customers. To be sure of having all the pairs you need, anticipate your Foot Safety Program and place your order at once. We'll ship a few pairs for immediate display — deliver the balance in any quantity on dates you specify.

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ALLENTOWN, PA.



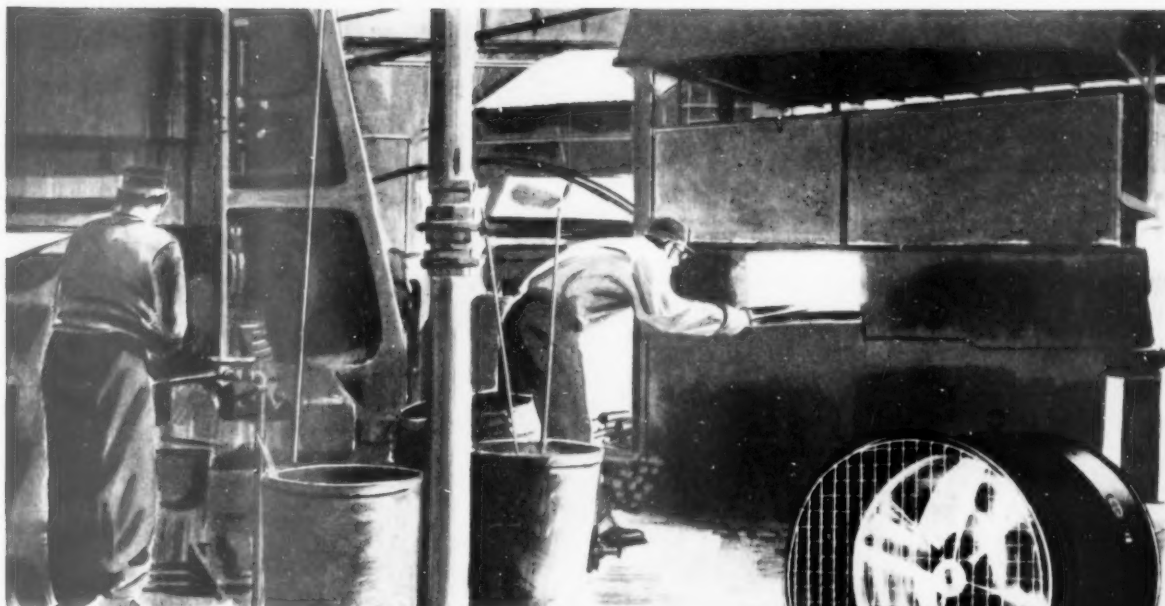
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On jobs where the air is foul or hot, men can't be blamed too much for letting up now and then. If you want to keep their efficiency and morale high, feed them better air.

Employers have learned the value of putting Coppus Blowers and Ventilators on the job . . . in confined areas and near furnaces or hot processes. The men work faster, do better work, work longer without fatigue — and appreciate the more comfortable working conditions.

Give some thought now to the "hot spots" in your plant. There is a

Coppus Blower for practically any requirement — Cable Manhole and Tank Ventilators, Boiler Manhole Blowers and Exhausters, Heat Killers, Shiphold Ventilators, etc. The Coppus "Blue Ribbon" is your assurance of design and construction planned for plenty of severe service. Check and mail the coupon for specific information. Coppus Engineering Corp., Worcester 2, Mass. Sales Offices in THOMAS' REGISTER. Other "Blue Ribbon" Products in BEST'S SAFETY DIRECTORY, CHEMICAL ENGINEERING CATALOG, REFINERY CATALOG.



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| <input type="checkbox"/> on coke ovens. | <input type="checkbox"/> motors, generators, switchboards. | <input type="checkbox"/> stirring up stagnant air wherever men are working or material is drying. |
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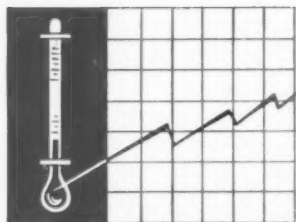
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PRODUCTS

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76 ROLAND STREET · DEPT. 51 · BOSTON 29, MASS.
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National Safety News, May, 1953

No Summer Letdown with these **2 cool safety shoes!**



S-4356—Doubly cool and comfortable. "Selective Ventilation" through scores of hidden vents, lets cool air in, keeps dirt out. Medium brown color. Leather-lined steel toe box. Leather sole. Rubber heel.



S-4360—The neatly-placed punch holes make this shoe cooler on the inside, better-looking on the outside! U-wing style. Medium brown color. Leather-lined steel toe box. Leather sole. Rubber heel.



Just show your men these high-style safety shoes and you're all set for Summer! Here's the coolest pair that ever helped lick a lag in production. Both are designed to let cool air in . . . to keep the wearer's temperature down and his spirits, up! Will men wear these shoes *by choice*? You bet they will! Look at that style. Look at that dressiness. You'd never know these were safety shoes. And they're so comfortable, men don't have to switch to slippers when they get home.

SOLD 2 WAYS

1. At Thom McAn stores. 2. Direct to your plant.

Write today for details of this last-named service and Thom McAn's 4-way employee purchase plan, plus descriptions of the full line of Thom McAn Safety Shoes to . . .

THOM McAN SAFETY SHOE DIVISION
25 West 43rd Street, New York 36, N. Y.

Men on their feet stay "on their toes"
in Thom McAn Safety Shoes!

National Safety News, May, 1953

Thom McAn

SAFETY SHOES

A DIVISION OF MELVILLE SHOE CORPORATION

**Bausch & Lomb non-corrosive
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- ✓ always with large adjustable nose pads
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- ✓ may be fitted with professionally-prescribed clear or absorptive safety lenses

THERE'S NO SUBSTITUTE

FOR BAUSCH & LOMB

METAL FRAME

SAFETY

GLASSES

Ask your Bausch & Lomb supplier to review with you the complete line of all-metal spectacle-type safety eyewear, or write: Bausch & Lomb Optical Co., 90317 Smith St., Rochester, New York.



Only *Safe-Hi* ladder shoes.... HOLD ON ALL SURFACES



Smooth,
Dry

The rubber in the Safe-Hi ladder shoe tread holds the ladder firmly on all dry surfaces.



Wet,
Slick

The cord, combined with the rubber in the Safe-Hi ladder shoe, securely holds the ladder on all wet surfaces.



Soapy,
Greasy

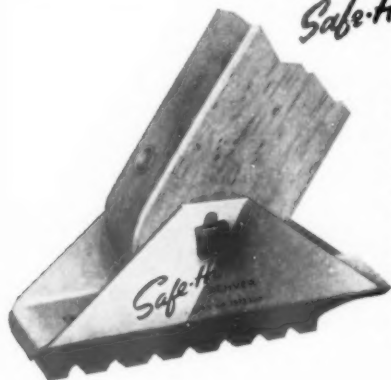
The straight ridges across the line of slippage, act as a series of squeegees, to scrape off foreign substances and grip the surface.



Ice,
Snow

The self-sharpening spike, made with a tempered tool steel core and instantly available with a flip of the hand or foot, holds firmly on snow or ice.

Safe-Hi LADDER SHOES



Stop ladder slipping accidents in your plant with Safe-Hi ladder shoes! Tests prove that the Safe-Hi ladder shoe—the only ladder shoe which gives the essential combination of cord, rubber and ridges in the tread, and a self-sharpening spike—will hold far beyond the recommended safety angle on all surfaces. The "high visibility" yellow on each Safe-Hi shoe, meets the safety color code, protecting against stumbling, tripping.

Approved by Underwriters' Laboratories for all surfaces, Safe-Hi ladder shoes are available in two models—steel and non-spark metal; and two widths—1 1/2" for straight ladders, and 1 5/8" for step ladders. For consistent ladder safety—specify Safe-Hi ladder shoes!

Safe-Hi CHISEL GRIPS

Now you can speed up production with safety! The new Safe-Hi chisel grip makes it easier to reach hard-to-get-at places, permits faster, more accurate work, prevents "creeping," eliminates smashed hands and fingers and prevents injuries from flying chisels.

18", two-man model—securely holds any large, sledge-driven tool up to 2 3/4" in diameter.

6", one-man model—securely holds any tool up to 1 1/4" in diameter.

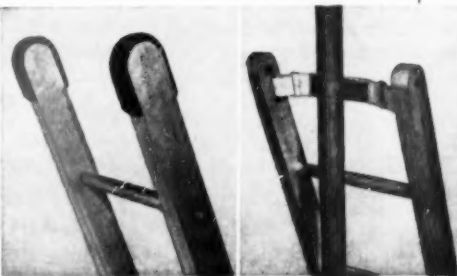


Safe-Hi WALL GRIP

The Safe-Hi wall grip holds the top of the ladder securely on all smooth walls. Prevents side slipping, and helps to hold the bottom of the ladder.

Safe-Hi POLE GRIP

Holds top of ladder on any pole, pipe or corner. Fits any ladder. Prevents sudden tipping which causes workers to plunge off ladders.



Safe-Hi SAFETY BELTS



This new, different chest-waist belt distributes shock load to two entirely separate areas of body, eliminates "slipping out" because of self-maintaining adjustment, light (wt. 1 lb. 13 oz.), comfortable, holds wearer erect after stopping. Other belts and shock absorbers, including the construction belt which fully meets U. S. Govt. Spec. 406-C, available. Consult us on your specific problems.

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ROSE MANUFACTURING CO.

1731 ARAPAHOE STREET

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FOAM FACTS

Published quarterly in the interests of fire protection everywhere.

NATIONAL FOAM SYSTEM, INC.

WEST CHESTER, PENNA.

Portable Foam House Cuts Maintenance Costs, Allows Plant Expansion

A large Southern refinery was recently faced with the need of eliminating the excessive cost of maintaining its main line chemical foam piping system. Also, a more flexible system was wanted, to allow for future expansion.

Portable System Devised

To solve this problem, engineers of National Foam System designed and installed a completely portable "Foam House on Wheels," consisting of two trucks and a trailer. Each truck was equipped with an Aer-O-Foam Liquid Proportioning Pump, a 900-gallon tank for Aer-O-Foam Liquid 3% Regular, nozzles and hose. One truck was equipped with a water pump, the other designed so that a water pump could be added later if desired. The trailer housed a gasoline-driven pump and hose.

Costly Piping Eliminated

Foam house and main line piping were abandoned, and only the lateral piping to foam chambers was retained. All existing chemical foam chambers were converted with the new National MCV foam makers for use with mechanical Aer-O-Foam.

Complete Flexibility

When fire occurs, a truck or trailer is spotted at a point near a water hydrant, the hose is connected and, when water is flowing through the truck, the Aer-O-Foam Liquid Proportioner is adjusted to inject foam liquid at the proper rate. Two flow meters provide a continuous check on the accuracy of the water and Liquid input. When tanks are not equipped with chambers, foam towers are similarly used.

The result is better, more flexible protection, elimination of the costly piping system and foam house, and adaptability to the expansion plans of the refinery.

COMPLETE FOAM FIRE PROTECTION... NO WATER OR POWER SUPPLY NEEDED WITH NEW NATIONAL PRESSURE-PACK



For complete foam fire protection where neither water nor power is available, the new National Pressure-Pack is the ideal answer. Here is a completely self-contained, pressurized, mechanical foam unit, supplied in four standard sizes ranging from 33- to 200-gallon solution capacity. The largest unit can produce 2,000 gallons of fire-smothering Aer-O-Foam in less than three minutes.

The Pressure-Pack is designed for use with overhead spray deflectors, dip tank or drainboard deflectors, floor nozzles or portable nozzles. Installations may be either portable or fixed. Operating pressure is supplied by a nitrogen or air cylinder.

A control for local manual operation is provided. Other available controls include remote manual operation, completely automatic operation, or any combination of these controls. The unit is easy to install and maintain, can be tested at any time without using Aer-O-Foam Liquid, and can be recharged in a matter of minutes after use.

For all isolated hazards, or wherever water and power are not available, the Pressure-Pack supplies the same dependable Aer-O-Foam that is so widely used by the largest refineries and bulk plants. A complete descriptive folder is yours for the asking.

150 Years of Skill


Although National Foam System, Inc., marks the Silver Anniversary of its incorporation this year, its experience goes back almost 150 years, through the days when its predecessor, James Boyd & Bro., was later one of the largest manufacturers of motorized fire-fighting apparatus.

In the late 1920s, National Foam developed the first dual-line dry powder chemical foam system used in this country. In World War II, National helped to save innumerable lives and ships through its development of Aer-O-Foam, the mechanical foam known as "Navy Bean Soup." Again, National helped design equipment for loading jelly gasoline fire bombs.

Today National Foam System still serves the Armed Forces while it expands to meet the growing needs of industry. New products, improved designs, greater variety are combined in National Foam's largest and most versatile line of foam and foam equipment to be found anywhere.

Send for Your Free FOAM FACTS Subscription

FOAM FACTS, a quarterly magazine packed with interesting information on foam fire-fighting, will be mailed to you entirely free upon request. Just send your name and address to National Foam System, Inc., West Chester, Pa. There's no obligation, of course.



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Dressteel style 5180 with air
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FATAL SHIPYARD FIRE \$150,000 LOSS, 1 DEAD

A general alarm fire which swept through the boatyard owned by _____ at East Norwalk, Conn. on April 10, caused the death of _____ and sent four Norwalk firemen to the Norwalk hospital suffering from severe burns received while fighting the fire.

The fire is believed to have started when a boat-owner, working in the bilge of his boat and using a hammer and chisel on an exhaust pipe, struck a spark which ignited fumes in the compartment.

Avoid \$150,000 sparks in your plant
— USE AMPCO SAFETY TOOLS

How to choose Safety Tools

For tools subjected to impact and/or torque — specify tools of Ampco Metal.

For tools with cutting edges and gripping teeth — specify Ampco beryllium-copper tools.

For jobs around acetylene and certain other gases — specify Ampco Monel® tools.

*Trademark International Nickel Co.

A few dollars invested in non-sparking Ampco Safety Tools could prevent hundreds of costly fires and explosions which strike unexpectedly every day. That's why Factory Mutual Laboratories and other safety authorities approve and recommend Ampco Safety Tools for use in hazardous locations.

Equip your workmen with Ampco Safety Tools. You earn lower insurance rates, improve workers' morale for greater efficiency — and protect your plant against paralyzing disaster. Send for free Safety Tool Catalog.

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T-5

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TRADE MARK

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Bifocal power is provided through entire window area, completely eliminating use of eyeglass bifocal segment.

Now...an effective optical aid which gives the welder who wears bifocal glasses the advantage of "full window" vision.

The Magna-Weld has lenses made of fine ophthalmic glass, precision ground and polished, and mounted in a sturdy frame which fits any standard welding helmet.

Magna-Weld comes in 2 sizes, 2"x4 1/8" and 2"x4 1/4" and in 8 accurate powers — 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25; 2.50.

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For ACCIDENT PREVENTION



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STONEHOUSE SIGNS

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"Signs Since 1863"



ACCIDENT PREVENTION • steel SIGNS IN STANDARD COLORS AND DESIGNS

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To find out how Schrader air control products can be put to work for you . . . to boost production—lessen operator fatigue—increase safety . . . send us a letter outlining your particular installation, your idea or fill out the coupon below.

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DIVISION OF INTERNATIONAL SHOE COMPANY,
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NEW YORK OFFICE: 147E 470E, 332 WEST 24TH ST.

Alcoholics in Industry

THE alcoholic is a well-known menace on the highway. On the job he is also a serious problem.

It has been estimated that the average alcoholic loses 22 days a year from the acute effects of tipping. His accident rate is double that of his abstemious fellow workers, according to the National Fund for Medical Education. His lost time because of other ailments is two days a year more than the non-alcoholics.

The alcoholic in industry is not a Skid Row derelict. He is usually a family man who needs and appreciates help. Often his plight is known only to his associates who try to cover up for him. Praiseworthy as their motives may be, such a course does nothing to solve his problem.

The alcoholic's problem is not merely a moral one. It is medical and social, too. Ruthless discipline by hard-boiled supervisors is not the answer. The patient is a sick man who needs the understanding of his associates—also expert medical help.

Problem drinkers are not confined to any particular group. They may be found in the higher levels of management as well among hourly wage workers. While an alcoholic executive may not create an accident hazard in the plant, his mistakes and neglect may be costly to the company.

Many large corporations have programs of their own. Among these are Consolidated Edison Company of New York, Standard Oil (N.J.), Du Pont, General Motors, and Metropolitan Life. Branches of two universities—Yale and New York—are working with industry on constructive programs. The methods include early recognition, prevention, cure and rehabilitation.

Results of these programs have been decidedly encouraging. Most noticeable has been the reduction of absenteeism. Other benefits to the employees, their families and their employers are less easily measured but no less important.

Treatment is tailored to individual needs. It includes an interview, a physical examination, and a personality appraisal. Suggested treatment may involve one or more of the following:

Individual physiotherapy—periodic interviews and discussions with friendly counselors, usually psychiatrists.

Group psychotherapy—discussions with other patients in groups of eight or twelve. Under the guidance of a staff member they talk over their problems, evaluate each other's progress, and give

mutual encouragement.

Tablets that make a person sick when he drinks. This method is used only when psychotherapy fails.

Medical treatment is used when need is shown by physical examination. Vitamins, hormones, and treatment for specific ailments caused by excessive drinking may be given.

Alcoholics Anonymous has given splendid support in many cases. Joining is purely voluntary and it often helps to sustain the patient over prolonged treatment.

Labor and management can both help by learning to recognize early cases and by encouraging the problem drinker to seek help.

By helping the employee control his drinking, the company not only helps him and his family but also protects its investment in his skills and services.

Self Castigation

MANY safety men will not like the article, "I'm Sick of the Three E's," by Charles R. Zeskey, Jr. And many readers who agree with many of his criticisms of the profession are not convinced that all problems of accident prevention can be solved with a slide rule.

Much damage has been done to effective safety work by the specious half truth that accident causes are 85 per cent human and 15 per cent mechanical. And too often "education" which is a catch-all term for everything from exhortation to sound training, is regarded as an economical substitute for sound engineering. Any educational program in a plant full of uncorrected hazards is on a very shaky foundation.

Safety men, like editors, need frequent and vigorous reminders to keep them on the beam. Too much time has been spent in discussing generalities while specific problems have been neglected.

Some people feel that washing dirty clothes in public is detrimental to any profession. In our opinion, it is far less damaging than assuming a pose of infallibility which fools nobody. Discreet frankness can be disarming to critics.

A publication which really serves its field will not bar honest criticism. The editors may or may not agree with them, but, as Macaulay said, "Men are never so likely to settle a problem rightly as when they discuss it freely."



At Safety's Morocco Base

When accident prevention runs up against a strange, difficult language and oriental fatalism, orthodox methods won't always work

UNDER a blazing Moroccan sun and the suspicious eyes of camels, donkeys, and sheep, the largest single construction contract ever undertaken by the Corps of Engineers was begun early in 1951 on the west coast of Africa.

Classified as a *Crash Program*, it was a hell-for-leather construction job which turned raw farm land into two first class air bases ready for dedication by Strategic Air Command bombers and jet fighters in 83 days. During these

hectic 83 days the Safety Branch of the Corps of Engineers was introduced to the unique and frustrating problems of accident prevention among a people who fatalistically consider an accident the will of Allah.

The cities of Morocco are built upon the wheel principle with streets leading like spokes from the center wheel either into the prairie or into other wheels, depending upon the size of the town. All things that move, be they bi-

cycles, carts, donkeys, camels, trucks, or automobiles, coming from the right have the legal right of way. In Morocco defensive driving means avoiding courageous donkeys, fearless bicycle riders, unconcerned pedestrians who can't see very well because they are often veiled to the eyelashes, and dodging the chap who shouts in French or Arabic, "I'm on the right, you can't hit me!"

When an Arab was run over by a truck while saying his prayers



Safety geared its program to mechanical devices in Morocco. Layout, guard rails, hand rails and stairways, bumper blocks, and lighting received special attention in quarries.

in the middle of an access road, his friends were delighted at this stroke of good luck. Ah, fortunate is he who has been swept from this earth while in the very act of praying! Totally unprepared to cope with such delight in death, the Corps of Engineers and Contractor safety engineers geared the accident prevention program to job training and mechanical safety devices.

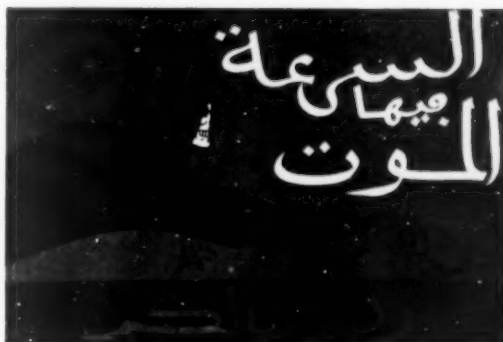
The bulk of personnel employed to build the giant North African bases were unskilled native Moroccans who were not only unfamiliar with American heavy construction equipment, they were terrified of it. Super C Turnapulls are still known as "The Monsters." That Americans would have to both supervise and teach this vast army of people who all seemed to be named Mohamed Ben Mohamed, was obvious, but unfortunately the Arabs could not understand English and the Americans could not speak Arabic.

The language barrier made on-the-job training nearly impossible and such instructions as were ab-



From right to left: Louis F. Andress, district safety engineer, E. R. Kraus, motor pool superintendent, Moroccan instructor-translator, Arab driver students review cause of a vehicle accident and way it could have been avoided.

Poster made on the project says "Speeder Beware" in Arabic. Posters are attached to sides of trucks, pickups and man-hauls. Subject matter changes regularly and is based upon the current principal cause of accidents.



The "Queen Mary" overflows with Moroccans as usual but the tail gate latch is below the bed level and cannot be reached by the passengers. Fencing personnel in was the only way to prevent Moroccans from killing themselves by jumping off moving man-hauls.

solutely necessary for the accomplishment of work were given through pantomime or by throwing rocks. A judiciously aimed rock at an Arab caught in an unsafe act was the best substitute for language and "rock supervision" became common practice.

Although Moroccan Arabic is a difficult language, a small booklet of pertinent construction phrases in phonetic Arabic was prepared and distributed to all supervisors. Some doubt first existed as to the likelihood of American construction men bothering to study a foreign language, but the Arabic-English pocket pamphlets became

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DANGER from the Sky

By JOHN A. DICKINSON

THE approach of the summer season brings with it the hazard of lightning for most of the area of continental United States. It is true that thunderstorms are very infrequent on the Pacific Coast, while certain Southern areas may have severe thunderstorms at any time of the year. Yet, in most parts of the country, lightning may well be regarded as a warm weather hazard.

Since the time of Benjamin Franklin (1750) lightning has been recognized as being a gigan-

tic spark occurring between an accumulation of electric charge in a cloud and the earth, or another charged cloud. The most common source of such charged cloud centers is the thunderstorm, of which there are two main classes: (a) local convective thunderstorms and (b) frontal storms. The former are the result of local heating of the air adjacent to the ground in summer, whereas the latter are the result of the overrunning of warm moist air by a mass of colder air, giving rise to turbulence as a result of relative motion of the air masses.

In either case, there results an unstable condition that causes the warm moist air to rise at an ac-

A hint of the awe-inspiring spectacle of a severe thunderstorm has been caught by this photographer. (Courtesy the Weather Bureau)

celerating rate and by the condensation of its moisture to form a tall cumulo-nimbus cloud. In such a thunderstorm cell, there is at first a violent updraft, followed later by strong down drafts. The little understood processes that lead to the separation of large amounts of positive and negative electricity are doubtless related to these vigorous air movements.

The usual thunderstorm involves several such circulation "cells," and in the case of a frontal storm, these may extend in a row for many miles. Usually negative electric charges accumulate in the lower portions of the cloud, whereas positive charges are carried to the upper portions, with the result that enormous differences of electric potential are developed between the top and bottom of the cloud and between the latter and the earth.

Lightning protection consists of providing a preferred path (lower resistance or more properly, low-



The multiple discharge nature of a lightning stroke is strikingly demonstrated in this photograph. This was not taken with a revolving camera; the effect is due to the changing position of the path of ionized air under the influence of wind and the buoyancy of heated gases. (Courtesy the Weather Bureau and Mr. Gaty.)

JOHN A. DICKINSON is Head, Safety Codes Group, National Bureau of Standards, U.S. Department of Commerce, Washington, D.C.



Even if the car is struck the passengers are safe. A dramatic test is made in the lightning laboratory of Westinghouse Electric Corp.



Dynamite couldn't have done a more thorough job. Here is evidence of the potential power of a lightning stroke. (Courtesy the Weather Bureau)

er impedance) to ground on the outer surface of, or at a short distance from, the structure to be protected. Mechanical damage and heating to incandescence result when there is no such path available and the discharge is through materials of high electrical resistance, such as wood, stone, or brick.

Many people believe that the lightning protective system protects the building by discharging the earth current from the sharp points of the rods so that the potential from the ground to cloud becomes less than that of the surrounding areas and hence, prevents a stroke. There may be some slight effect of this kind with very tall structures but generally speaking, the current discharge from the points is too feeble to affect materially the rapid rate of accumulation of electric charge occurring in the thundercloud.

If the earth-current discharge theory were sound a mountain covered with evergreens should never be struck since there are unnumbered millions of sharp

points to discharge this current, yet a very considerable percentage of forest fires are started by lightning.

Deaths from lightning range from 375 to 500 annually, most of them occurring out-of-doors. Certain sports seem to have an unduly large number of deaths from

lightning. In the case of golf the death rate has been so high that the U.S. Golf Association has made a study of this hazard and issues an annual warning to its members and has gone into the study of design of emergency shelters that would afford protection against

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Earthquake? No, just a playful lightning bolt. (Courtesy the Weather Bureau)



If safety engineers are of smaller stature than some of the other varieties, who's to blame? Here are some sharp criticisms by one who feels that his profession has neglected the vital "E" — Engineering.

I'm Sick of The "3 E's"

By CHARLES R. ZESKEY, JR.

ONE of our trade journals, which shall remain nameless since it wasn't NATIONAL SAFETY NEWS, recently printed a short article by an equally anonymous plant manager who said that there are two main things wrong with safety engineers: First, he said, they're impractical. Second, they're meeting-happy.

There just isn't room for argument about this, although I did read a lot of letters in protest of his criticism. He was right. We

all know it, and we might as well admit it. If you've been in accident prevention work long enough to make your first list of recommendations, you know that these are the objections you have to face time after time.

Since I believe that if you get enough opinions from enough people you're going to be able to come to a pretty accurate conclusion, whether you're nominating a candidate for the presidency of the United States or testing a new breakfast food, I've got to believe that this plant manager was right. He simply repeated what my ears have been hearing for fifteen years — yours too.

When you really think about it,

this is a pretty silly state of affairs: For at least fifteen years, this profession of ours—if it is or should be called a profession—has been subjected to this identical criticism, a justifiable criticism by all the evidence, and we have done precious little about it.

All we've done actually is pass a few resolutions in our little societies, frame a few by-laws to our little society constitutions, and raise a wail to high heaven in complaint of the deservedly-small stature we assume beside the great mechanical and industrial and chemical and civil and electrical engineers who are shaping the world today.

Shaping it, I'm convinced, more effectively and finally than all the politicians who have ever caucused or dreamed of caucusing in this or any other meeting room.

The Hand That Rules the Paper Rocks the World. That was in an advertisement of a manufacturer of engineering drafting equipment ten years ago. It's something we, or any other group of engineers should remember for the rest of our professional lives. And it bears directly on the problem which, I think, is the most serious professional one we face today.

We're in the midst of a pretty silly state of affairs. We're pretending to be engineers on one hand and doing essentially nothing about criticism that has proved us not to be engineers on the other.

Let's consider the subject of this meeting. The subject here is, if I remember correctly, "Shaping the Woodworking Employee's Attitude Toward Safety." Now that's really a humdinger of a subject. It's so broad that I can hardly stray too far to be accused of ignoring the

CHARLES R. ZESKEY, JR., is chief engineer, T. H. Mastin and Co., Kansas City, Mo. This article has been adapted from an address before the 40th National Safety Congress.

well thought-out and organized plans of the program committee. By mere coincidence the shaping of attitudes happens to be the exact thing that concerns me and which lies behind the criticisms of that anonymous plant manager.

What does "Shaping an Attitude" really mean in good, plain engineering English? I *think* it means changing somebody's mind—which of course implies that the mind-changer is in a position to present some solid facts and figures which will make a person believe something today that he didn't believe yesterday. That is to say, the mind-changer knows what the hell he's talking about.

Specifically, the safety engineer must be able to answer these questions which our plant manager says he asks: "How much will it cost? Is there another way to do the same thing cheaper or better? Will it pay off? How do you know? What are the things which have to be done to get this brain-storm into action?"

Let's look again at his criticisms: *Impractical* and *Meeting-Happy*. I don't like that old dodge of falling back on dictionary definitions because too often dictionaries are just plain wrong. But here's a case that I can't resist. My dictionary defines "practical" as: ". adapted for actual use engaged or experienced in actual practice or work mindful of the results, usefulness,

advantages or disadvantages, etc., of action or procedure."

So when we're "impractical," what are we? That's easy, we're *not* experienced in actual practice or work. We're *ignorant* of the results, usefulness, advantages or disadvantages of the action or procedure or work or machine under consideration. In other words, we just don't know which end is up; we don't know what the hell we're talking about.

Yet here we're worrying about "shaping attitudes." (Why don't we say *Changing Minds* and stop that schoolteacher double-talk?) We're worrying about changing peoples' minds while we have to admit to a criticism which proves we aren't competent to do it.

We're Not Engineers

Do I have to belabor the point and argue that being *Meeting-happy* is another nail in our coffin? I hope not. At any rate, I'm not going to do it. You can figure it out as well as I can.

We're *Impractical*. Do you know why? We're impractical because we're not engineers.

If a man strains his back lifting a half-finished flush door after we've told him over and over how to lift correctly, what do we do?

We can be a big, bad policeman and grab down our handbook on *Enforcement*, go out in the plant and raise merry Ned with the poor guy with the sprung back.

Maybe even give him a three-day layoff and call his foreman on the carpet.

Or perhaps we lean toward the old-maid schoolteacher philosophy. We pull out our little file with the *Education* label on it and dream up plans for a big poster-and-lecture campaign.

We wheedle the boss into closing down the plant for fifteen minutes and giving a lecture (complete with pictures and charts we didn't draw and a text we didn't write) on *How To Lift*—all of which provides an additional rest period for the lucky employees at a cost of several hundred dollars to the poor, unenlightened, reactionary plant manager who had the temerity to call us "impractical."

Brothers, if that's the way an engineer would handle the problem, I'm a Southern Democrat.

Before some of you smile complacently and tell yourselves that I've only told half the story or that I'm exaggerating the facts, let me finish.

Somewhere along the line maybe it will occur to a half-way smart safety engineer—or more likely he'll get the idea from some workman or straw-boss—that things could be arranged so that the doors don't have to be lifted.

Instead of manhandling them from a stack to a handtruck, dragging them 20 or 30 feet, setting them on the floor and then lifting them back up to the machine bed, they could be slid on to a rolling table, moved from stock to the work area with nary a lift. That's engineering. Very elementary engineering, to be sure, but still engineering.

But the job's only half-done because we already have our reputation for being "impractical" and the first thing the manager or superintendent thinks about is that this idea is impractical too. So what do we do? Wring our hands some more, shake our bowed heads and fall back on *Education* and *Enforcement*? Start to play schoolteacher and policeman?

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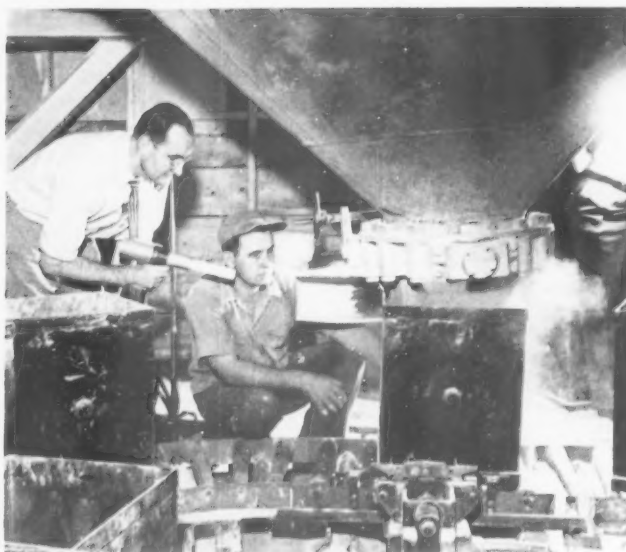
They're meeting happy

Health Detectives Stalk Invisible Enemies

MORE than 7,000 materials are used in the plants of the Westinghouse Electric Corporation. Many of these may be toxic or harmful to some extent. Materials are first approved by the materials engineers, then by the industrial hygiene engineers. They are recorded on a material card under a system founded by George Westinghouse.

Protecting employees from occupational hazards is nothing new to Westinghouse industrial hygiene engineers. They have been carrying on their protective work ever since the group was founded in 1932.

Dust, fumes and a wide variety of hazardous materials are the enemies of the group headed by H. Wilbur Speicher, director of the Industrial Hygiene Laboratory. And more recently, radio-



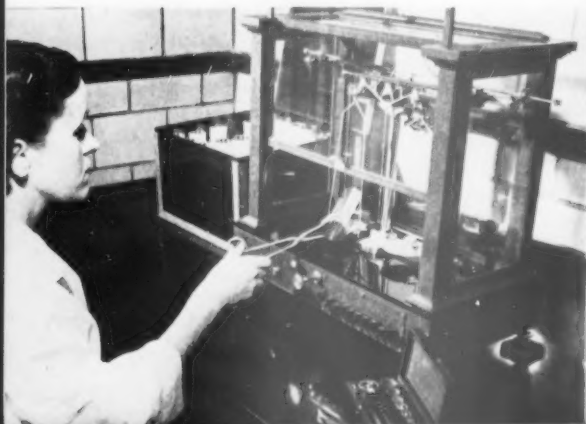
A portable "dust-catcher" is used to detect whether the ventilation hood over this machine is adequately removing dust from operator's breathing area. The machine mixes silica compounds used for making molds, then loads mixture into boxes. After dust is collected, it is weighed and measured in the laboratory. Tests guard against excessive exposure to dust.



H. Wilbur Speicher, Industrial Hygiene Laboratory Director, inserts a dust tube into one of his "radiation-counting" instruments. The expensive apparatus is used to detect alpha, beta and gamma rays in the radioactive material that has been collected in the tube from air sample.

A stainless steel tube used in an electrostatic precipitator is weighed. The tube is used to collect dust or fume samples from breathing atmosphere.

Water used in laboratory work is doubly distilled to insure high purity. Delicate tests are made to determine presence of lead, mercury, cadmium and other toxic substances found in biological fluids, air samples, cleaning compounds.





A micro-projector is used to magnify dust samples up to 1,000 times their size. If excessive dust is found, health detectives call for added ventilation or wearing of proper respiratory equipment.



Radiation intensity is measured with a portable radiation counter. Film badge dosimeters on wrists measure total radiation exposure.

activity has been added to the list of hazards confronting these "health detectives." They find out what materials can be harmful and then keep them under control.

After one of their recent surveys, many small photographic films were developed in the dark room at East Pittsburgh plant. When they came out of the developer they looked blank.

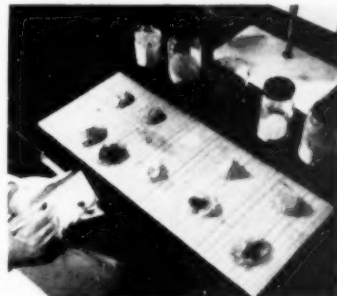
But each of these seemingly blank films carried a vital message to Mr. Speicher and his staff of six specialists. By comparing the developed films with samples that had been exposed to known amounts of radiation, they can tell how much radiation, if any, has been absorbed.

Sensitized films are enclosed in personal badges worn by such employees as the research engineer who works with radio active isotopes or the employee who uses an X-ray unit to look for flaws in a casting. These film badges measure the amount of radiation to which the bodies have been exposed.

So far, the amount of radiation absorbed by any employee has been small. But should anyone approach the danger point, the industrial hygiene laboratory would know it immediately and take steps to safeguard the employee.

Service of the Industrial Hygiene Laboratory is available to all company plants. It is a form of preventive medicine designed to protect the health of employees.

These are samples of oil absorbents that are scattered on the floor around machines to prevent falls by employees. Absorbents are carefully tested before they are approved for use.



A new soap is tested for non-irritation-producing qualities. In addition, the cleaning ability of the soap is tested.

A portable "vapor tester" is used to make sure the silver-plater in picture isn't exposed to harmful vapors.



PART TWO

GROUND SAFETY with the Pacific Airlift

By NORVAL BURCH

"Service Is Second Only to Safety"



Human blood is rushed by MATS to Korea (as illustrated in Pegasus, Fairchild Engine & Airplane Corp. publication).

CONSERVATION of manpower and materials through accident prevention, a basic concept of good management everywhere, is a goal of paramount importance to the United States Air Force—and to its global airlift arm, the Military Air Transport Service.

That is why Ground Safety and Flying Safety, twin guardians of MATS planes, personnel and cargo, seem to be accepted as per-

sonal responsibility by every officer and airman in this major command.

This attitude was evident to me in every contact I made on a recent study of the Pacific Division of MATS, when I traveled to Japan, Guam, Kwajalein, Johnston Island and Hawaii to see how this Ground Safety Program worked.

Time after time, the MATS Command has won Awards of Honor for its Ground Safety Program world-wide, and just before I left, two of its Pacific bases, Hickam Field and Johnston Island, had won Awards of Merit. To us in the National Safety Council headquarters, this was evidence that an intensive and highly effective program was being applied by this branch of the Air Force, so it promised to be a good safety story.

It was no surprise to me, then, to find competent and industrious Ground Safety officers and technicians employing professional accident prevention techniques comparable to the best I've ever seen in private industry. And again, to cite another corollary in private industry, where the interest of top management must spark the program and make it effective all down the line, I found the Ground Safety Program of vital concern to the top command at every headquarters and base I visited.

First evidence of this, when I landed at Haneda Air Force Base

on the outskirts of Tokyo, was the enthusiastic interest in the program expressed by Lt. Col. Richard H. Cook, Director of Personnel and Administration for the 1503d Air Transport Wing of MATS, which operates the Far Eastern terminal in Japan. He and Capt. Myles Connelly, public information Officer, with Warrant Officer Harry Dreyfuss, Ground Safety Officer for the 1503d ATW, met me at the plane and helped me through customs.

Colonel Cook gave me a quick run-down on the command view of the accident prevention problem and the administration of the program, while Myles and Harry were drawing up a stiff schedule of visits for me to follow in the coming week. As personnel chief, Colonel Cook has ground safety as one of many administrative responsibilities, but my guess is that it is one of the closest to his heart.

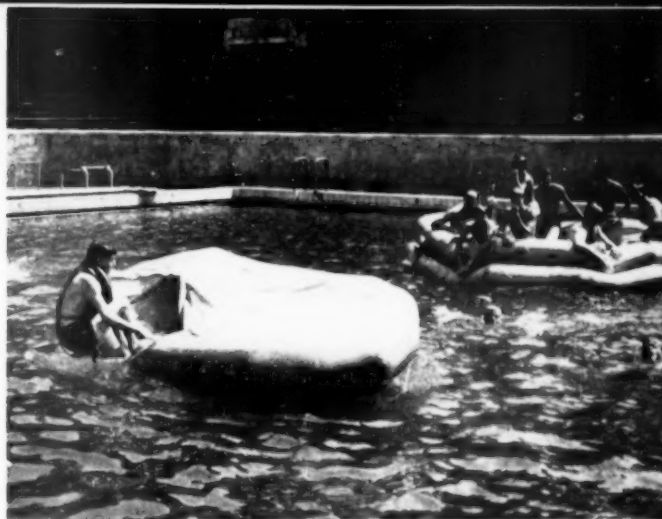
He related some of the more basic safety problems of the base, such as the difficulty of imparting safety knowledge to the swarms of indigenous laborers on the base, because of the language barrier; the fouling of an otherwise good safety record by military personnel in too active sports and other off-duty activities; the troubles of American personnel with the left-hand Japanese traffic flow and its maddening confusion, and so on.

But with obvious pride, he told

NORVAL BURCH is editor, *The Industrial Supervisor* and Associate Editor, *NATIONAL SAFETY NEWS*.



Photos by the author
and U.S. Air Force



Survival at sea is important to MATS ocean-flight crews, who study swimming and life-raft handling in Meiji Pool in Tokyo.

of the effective attack on these problems by the Ground Safety Officer and his limited staff, and of the willing cooperation given to Harry Dreyfuss and his program by squadron and group commanders. He pointed out, among many other bits of evidence of an active program, the safety posters bearing both English and Japanese legends.

At this MATS base, as throughout the U. S. Air Force, the Ground Safety Program is not a directive function, but an advisory service to guide and assist commanders and supervisors on all ground accident prevention matters. Continuing analysis of information collected from accident reports, from inspections and from operating personnel and other

sources enables the Ground Safety Officer to determine the necessary corrective measures. He then makes suitable recommendations to the supervisor responsible for the particular operation. Responsibility for applying the recommendations then rests with the operating personnel concerned.

Commanders and supervisors at the Haneda base seem to like this arrangement, and Harry Dreyfuss is always welcome at every office. In fact, some of the officers are so enthusiastic about the ground safety program their very safety consciousness makes Harry's job easier. Many times they uncover and report accident potentials that might have been found on the next safety staff visit.

There were many examples of

this attitude at Haneda, but the first to come to my notice was that of Lt. Col. John G. Williams, who commands the Transport Control Center. He was the first to call my attention to the operating slogan of MATS: *Service is second only to Safety.*

What a slogan! And how well the men and women of MATS live up to it!

Colonel Williams follows such a busy schedule in one of the world's busiest transport control centers, it's a wonder he can get it all done, but he always has time for safety. When Harry and I went to his office, he told the Ground Safety Officer of steps he had taken to have an oil slick removed from the ramp before it could cause an accident; he suggested recommenda-

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Tokyo Chief of Police (standing, second from right) sees MATS driver test demonstrated by Sgt. Hugh Muylle.



Japanese instructor (pointing) and MATS airman educate military and indigenous drivers in Haneda Motor Pool class.



Grinding booths equipped with local downdraft exhaust. Face protection is also provided.



PART II

Practical Aspects of Dust Suppression

By **W. B. LAWRIE**
M. Sc., F.R.M.S., A.I.M.

LOCAL exhaust ventilation systems normally consist of a hood, duct and a dust collector. Theoretical considerations are usually concerned with hood designs, duct designs, and fan characteristics. But the major problem is to get the dust into the duct.

Once the dusty air is safely through the hood and into the duct it can easily be conveyed to a dust collector. It is quite another

matter to capture the dust cloud. Far too little is known about the mode of dust formation, and propagation from its point of origin. The aerodynamics at this end of the local exhaust system have unfortunately received nothing like the attention given to the somewhat easier problems of dust conveying and theoretical fan design.

The first necessity in any local exhaust ventilation system is to capture and contain the dust. It is probably true that this has been achieved only where it has proved possible to enclose completely the point of origin of the dust. It is certainly true to say that total enclosure represents the most efficient and the cheapest method,

Here again there is an urgent need for better cooperation between process men, machine designers and ventilating engineers. Every dust-producing process should be carefully studied with a view to devising working methods which allow total enclosure. This should be done before open hoods are considered. In many cases total enclosure has not yet been achieved, but the point at which the dust is generated should still be enclosed so far as this is practicable, and the partial enclosure should be designed so that the volume of air inside it is as small as possible. This implies a close fitting hood with a small opening.

Where it can be arranged such a design has advantages over the big

This article, Part II of one which appeared originally in the *British Journal of Industrial Safety*, is presented in condensed form through courtesy of the Royal Society for the Prevention of Accidents, London. Part I, which appeared in the February issue, dealt with the more general aspects of dust suppression.

Illustrations are from industrial plants in the U. S. A.

open fume cupboard type of enclosure which has a large area across which air has to be extracted. These large open faces need large volumes of extraction air and give a correspondingly large heat loss. Even the high air volumes used provide only low velocities over the face of the opening, and may not give efficient control of the dust.

More thought should be devoted to the use of high velocity air curtains which operate on small air volumes. These would result in much smaller heat losses, and there is reason to believe that they provide more efficient dust control. High velocity air curtains may be obtained from suction fans, or they may be provided by jets. The jet may, of course, dissipate dust, if a dusty object is lowered into it, but it can be employed in conjunction with an exhaust hood, when the positive, high-velocity, low-volume air curtain it gives is used to direct the dust into the exhaust hood.

A careful study of the process generating the dust may suggest adaptations which will facilitate application of local exhaust ventilation. A good example appears in the modern mechanized foundry where moulds are placed on a conveyor belt. Molten metal is poured into each mould from a ladle which is supported on a block and tackle running on an overhead rail.

The system can be operated in two ways. Either the moulds can move past the ladle which remains stationary, or the ladle can be moved along the conveyor belt from mould to mould. Fumes are evolved as the metal is poured into the mould and local exhaust ventilation is applied to control them. If the ladle remains stationary, and the moulds are brought to it, the area of the pouring operation is limited to this one position, so

local exhaust ventilation need only be applied to a small area.

If the ladle is moved along the conveyor, fumes are generated along its full length so that the local exhaust ventilation must be applied over a much bigger area.

When large numbers of machines or processes operating in a single room have to be fitted with local exhaust ventilation, it is almost certain that there will be a high rate of air extraction from the room. This involves a correspondingly high heat loss.

Efforts are being made to supply cold air to the local exhaust ventilation system. If this could be done, unheated air from outside would feed the local exhaust units and be extracted and returned to outside atmosphere without being heated, and without affecting the heat balance in the room. Much more thought needs to be given to this idea, which would offer great savings in fuel costs.

Local exhaust ventilation is sometimes applied to enclosures of the fume cupboard type in small rooms. The reason for the small room is that the dusty process is thereby separated from other work. In these cases great care must be taken with the supply of air from outside.

If the fan on the fume cupboard is large, the rate of air extraction through the hood may be so high that a negative pressure is set up in a small room. In consequence, the opening of a door may allow such a rush of air into the room that the direction of air flow across the hood face is reversed, and the dust blown all over the room by the erratic eddy currents which result. This effect is not so apparent in large rooms.

Recent Developments

Much exploratory and development work has been undertaken recently in one industry and the results have been published.

In 1943 a rapid dust estimation technique was devised to permit rough comparisons between conditions in different foundries and to facilitate collection of dust samples. This method shows the residual dust concentration in the air and permits an estimate of the efficiency of various dust-suppression measures.

In half a dozen buildings selected at random, it was noticed that the dust concentration in the roof exceeded that at the breathing level, which suggests that general ventilation might be defective.

It was also noticed that swing-

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This man is filing magnesium castings in a booth equipped with exhaust ventilation.



Home Away from Home

By FRED F. BEIK

In motels, hotels, cabins and trailers, tourists by the million face both hazards of home and unfamiliar risks. Here are some hints from an experienced traveler

WHEN my friends ask if they will be safe in a hotel, motel, trailer camp or a mountain or sea side cottage, I reply that the places we go on vacation usually are safe. Most of the accidents which happen to people are caused by their own negligence.

There was a time when we went to the theatre and the first thing we saw on the screen was a statement in large letters, *Look now and choose the nearest exit*. This precaution is just as important when registering at a hotel or motel. Upon arrival, we should inspect the place and surrounding grounds so that we know the structural or physical hazards and, in

an emergency, we can get out quickly and safely.

Look for the *second* exit or path of escape. There were 492 persons killed in the Boston Coconut Grove fire. Many were trampled to death trying to get out through the main or front door while others escaped safely through the kitchen and back of the restaurant. What would happen if you were suddenly awakened at night by the cry of "Fire"? Could you put on a pair of shoes in the dark?

Boy Scouts, training for safety, make a game of dressing in the dark. Outer garments and shoes are placed in separate piles before each scout. The blindfolded boys, on a given signal, race to see who can get dressed first.

Some morning, when the alarm goes off, get out of bed with your eyes shut and find out how far

you can go in dressing yourself before you must look for some of your clothes. How would you look, and what protection would you have, in a real situation at night, if the electric power had failed? Can you get out of bed and step into your slippers or shoes without looking for the place where you left them the night before?

Getting out of a room in the dark is a difficult problem. A blindfolded person facing the door from one end of a reasonably large room will fail to find the door nine times out of ten.

Danger of fire while smoking in bed cannot be overemphasized. For our own protection and that of others we should refrain from smoking in bed. We may not realize that we are exhausted from a long trip and apt to fall off in a deep sleep while smoking.

The lighted end of a cigarette has temperatures ranging from 800 to 1200 degrees. Remember too, that paper burns at 450 degrees, wood at about 475 degrees. In recent years some 2,500 Americans have successfully cremated

FRED F. BEIK is Superintendent, Engineering Division, American Insurance Group, New York City. This article has been condensed from an address before the 22nd Annual Convention, Greater New York Safety Council.

themselves, many burning down the buildings with them.

In Milwaukee every hotel room now displays a new sign: Smoke can cause a fire, and you will be fined or imprisoned whether you caused it "wilfully or wantonly." Rhode Island prosecutes for tossing a cigarette butt from a car. In California it is a crime to place a live cigarette, cigar or pipe where it might "either directly or indirectly" cause a fire. Detroit has convicted 30 in four months where fires in hotels were started as result of smoking. A good habit is never put a cigarette down unless you put it out.

The first important safety device required when we go on that vacation is a good flashlight. I would also suggest a first aid kit. Mine is a simple one made out of a tobacco can. It has a metal slide attachment so that I can wear it on my belt when on a hike. It differs from most kits in that it contains a dime for that emergency phone call, a package of matches, a small candle for use when other lighting fails, a safety pin, and about 3 feet of string for that emergency rip or tear. It also helps in starting a camp fire in the wind and rain. This is in addition to the normal first aid equipment of bandage, band-aid, antiseptic, burn ointment and ammonia inhalants.

We should have some advance information about the places we plan to visit and the kind of weather normal to the area so that we may provide ourselves with suitable clothing. Should we plan to do any hiking or sight seeing on foot, we should at least have one pair of good sensible walking shoes.

Last summer, we spent our vacation in the Northwest and visited Banff, Lake Louise, Glacier National Park, Yellowstone and top of Crater Lake in Southern Oregon. We went prepared to dress for meals and were surprised to find that in the best of places, sport clothing and slacks were the accepted mode of attire. We had five suitcases for four people, and

every time we moved it was a job of lugging the suitcases in and out of the car trunk. Most of the time we stayed at motels, but occasionally had to hike from the parked car to the motel. Had we known a little more about the places we were to visit, we would have been able to travel a great deal lighter.

You should consider the number of places you are going to visit and pack your clothing so that you do not have to repack everything at every move. On a family trip, all toilet articles can be packed in one suitcase, and all heavy or rough clothing be kept together. The proper packing and handling of materials will reduce the accident hazard.

Types of Accommodations

The hotel: We usually check into a hotel in the evening and everything is in readiness for our arrival and accommodation. The bell boy escorts us to our room, and after turning on the lights and opening the windows, we are on our own. For our safety, we should make a complete inspection of the room, including the bathroom and closets. You have probably encountered one of those trick showers which gush out both cold water and hot water in spurts, or either runs so cold or so hot that you are either frozen or nearly scalded to death. Try the shower before you get under it to use it.

Also, look around: is there a fire escape at your window? Find out where the nearest exit is, and

where that *second means of escape* is located. Are there any unusual conditions in your room such as a very low window or a step-up or down into a closet or bathroom? Do all the lights work? Usually there is a chart or directory on the inside of your room door which gives suggestions or states the hotel rules.

We should be aware of the changes in hotel routine between the afternoon or evening when we arrive, and the morning when we are leaving. Remember, the hotel housekeeping must be done during the day and there will be all types of carts and movable equipment in the halls—vacuum cleaner hose and wires may be lying across the floor. Hotel hallways are usually not well lighted and we may not be instantly aware of this equipment. Mechanics may be making repairs.

You will recall the Winecoff Hotel fire in Atlanta. An Army officer and his wife were trapped a dozen stories above the street with no hope of reaching the fire escape. They opened the water taps all the way in the basins and bathtub, soaked the blankets then draped them over the outside of the door to keep the door from catching fire as long as possible. Together they stacked the mattresses and dresser against the inside of the door, soaked the mattresses by carrying water from the bathroom in a waste basket and a pitcher. By this time the water was two inches deep on the

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People Need Maintenance, Too

By W. E. PARK, M.D.

A good medical service is vital to the success of any accident prevention program

INDUSTRIAL production as we know it today depends upon two fundamental elements, men and machines. Around these two industry revolves with perhaps some confusion as to which is more important.

In the early days of industrial expansion machines were new and awe-inspiring so they assumed major importance while employees were cheap and plentiful and therefore considered expendable. With the application of inventive genius machines became more and more complex and more costly to replace. Consequently, it was natural that great attention should be given to machine maintenance and repair. Hence the development of the maintenance crew.

As machines became more complicated, more knowledge and skill

became necessary for their operation. Slowly an appreciation of the value of the workman himself came into the picture. At the same time, the civilized world was developing a moral conscience and an awareness of the sacredness of human life. Compensation laws began to come into being and with them, some awareness of the employer's responsibility for the health and welfare of his workmen. It is only in recent years that accident prevention and health services have become recognized and begun to contribute so important a part in industrial progress.

Both the safety director and the industrial physician are concerned primarily with human maintenance in industry. They constitute a team working together, in somewhat different areas, to accomplish a similar purpose—the preservation of human life and limb.

You safety men, in a way, bridge the gap between machine maintenance and human maintenance. You are concerned with

the guarding of machinery and the handling of materials and equipment in such a way that a man does not hurt himself nor his fellow workmen, while we, in the medical field, are concerned mainly with the maintenance of health and productive capacity in the workman himself.

As industrial knowledge and experience have grown, machines have been getting more and more intricate, but they are still not as complicated and hard to understand as man himself. You can no longer maintain a machine with a shot of oil and a monkey wrench. And you can't keep a man on the job with a laxative and a crack of the whip.

Being a good nurse or doctor in industry is a big job, requiring special training and a large portion of natural inclination. The scope of a health service in industry is large and varied. At least half the purpose of medicine in industry is prevention, just as machine maintenance is prevention rather than repair of a breakdown.

Those who are engaged in accident prevention know that when the cause of accidents is investigated, about 85 per cent of accidents are found to be due to human failure. I don't mean that there are not other mechanical factors involved. But I do mean that in 85 per cent of cases someone failed to do the right thing, or did the wrong thing, such as violation of the safety rules, failure to fix a unit known to be defective, failure to heed warning signals, misinterpretation of an order and so on. If this were not the case safety men would not need to continually carry on educational cam-

Dr. W. E. PARK was born in Canada in 1901 and spent his early years on his father's farm in Norfolk County, Ontario. He was graduated in medicine from the University of Toronto in 1927 with honors. He conducted a general practice in rural Ontario until 1942 when he began a career in industrial medicine. He distinguished himself during the war through his clinical research on TNT poisoning. In 1945 he was chosen to develop and head the health services and industrial hygiene program of Canada's Atomic Energy Project at Chalk River, Ontario. After 4½ years in that position he moved to Minneapolis, to become director of the Division of Industrial Health in the Minnesota Department of Health. Since May 1, 1952, Dr. Park has been assigned the job of developing an Industrial Health Program in the Minneapolis Health Department. This article was presented before a meeting of the Minnesota Section, American Institute of Electrical Engineers and Northwest Chapter, American Society of Safety Engineers, Minneapolis, February 9, 1953.



paigns. We would merely have to guard everything possible and lay out proven operating procedures.

You are all well aware that there is such a thing as accident proneness. But perhaps you don't know that accident proneness is related to other personality deficiencies or inadequacies. Some time ago an interesting study was made in Montreal. A group of approximately 100 men, each of whom had a record of from one to four automobile accidents, was compared with another group of about the same size, none of whom had a record of any automobile accident. This might be considered an accident-prone group and a normal control group.

The names of both groups were presented to various agencies to find out if they were known to the agency. First, the psychiatrist conducting the study inquired of a credit bureau or collecting agency and found that 34.3 per cent of the accident prone group were known to them, which means they had difficulty in paying their debts as compared to 6 per cent of the control group.

They also found that 34.3 per cent of the accident prone group were known to the adult courts (non-traffic courts) as compared to only 1 per cent of the control group. Going back further to earlier years they found that 16.6 per cent of the accident prone individuals were known to the juvenile courts as compared to 1 per cent of the other group.

To find to what extent the accident prone were able to maintain themselves without community help, the researchers went to the social service agency and found that 17.7 per cent of the accident prone were known to them as compared to 1 per cent of the control group. Even the public health and venereal disease clinic knew 14.4 per cent of the accident prone as compared to none of the control group.¹

This points up the fact that accident prone people have social difficulties all along the line. They are sick people or immature people.

Whatt'd He Say?

JEROME came dashing into the office and with an impassioned air exclaimed, "Ferdy's flipped his lid, sure as shootin'!"

Whatt'd he say, whatt'd he say?

We intellectuals confabulate in a patois which is limpid, but the proletariat types colloquize in a manner which is simply plebeian.

Jerome settled down a bit and said, "I say, Ferdy's flipped his lid, er uh, blown his stack, er, in plain simple everyday words, the kid's gone. . . . Ardy knocked a wrench off the platform, conking Ferdy on the noggin, and Ferdy took off after him like a mad man. I think the lad's batty."

"Indeed," I replied, "this type of frivolity will never do. These episodes may prove to be a stumbling block in our safety program. I must take action. Obstreperousness or proclivities toward rash dissipation cannot be tolerated."

Jerome replied, "I thought you'd wanna know. Now I'm gonna throw George over the machine that rope he's yellin' for."

No sooner had I settled that enigma than Beardsley came dashing in with an advertisement he had clipped from the newspaper. The "Over Thirty Dance Club" was advertising "Clean Wholesome Dancing every night but Monday." . . . I heard later that Beardsley talked several of the boys into going down there on Monday. . . . The cafe across the way has a sign posted that reminds me of this same incident. It says "Good Food Served Until 2:00 P.M." I've never eaten there after 2:00 P.M.

I do declare, things are so ambiguous and difficult these days.

I endeavor to inculcate safety without inculcating the individual with improbity but to no avail. All neophytes are given a consummate preface to their tasks but our Safety memorabilia continues to appear (pardon the slang) lousy.

* * *

By now, you are probably thoroughly confused as to the objective of this whole ugly mess. However, this discourse is indicative of the confused manner in which much information and instruction is given these days. The language used is either miles over the employee's head or the material is presented in such a loutish manner that the individual is left in many instances knowing little, if any more than he did before. Then, when a mistake is made, the reaction is "What's the matter, he stupid or something?"

As for me, I prefer to be the lotus-eater type.

Whatt'd he say man, whatt'd he say?

ROBERT D. GIDEL, Senior Engineer,
Industrial Department, National Safety Council

They need the diagnosis of a doctor or a psychiatrist. It is not enough to give them a warning or a penalty. Often safety men or supervisors are too slow in detecting an abnormality of this kind or

too reluctant to do anything about it. Listen to this plea of an accident prone individual: "Why didn't somebody kick me in the pants 10 years ago and make me

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Controlling Heat Exposure

When the temperature passes 90 degrees the body needs all the external help it can get in maintaining normal temperature

BODY HEAT balance is a physical necessity for comfort, health and working efficiency. To stay healthy, the body temperature must be approximately 98.6 degrees F.

When the thermometer hovers between 65 and 75 degrees, the heart has no trouble maintaining a healthy body temperature. A healthy person can stand a few degrees more or less in either direction. But when the thermometer rises above 75 degrees, the heart must work overtime to keep body temperature normal. At 90 degrees and over, the body needs all the external help it can get in maintaining normal temperature.

This body heat balance may be upset by heat in summer or by cold in winter. Keeping warm in winter is comparatively simple through artificial heat for buildings and warm clothing for outdoor wear. Keeping cool in summer is much more difficult. Even where it is possible to maintain a comfortable working temperature, the employee is likely to be confronted with a sudden and



In a typical industrial heat exposure, both the air and the surrounding surfaces are hotter than the body. This heat, plus that generated by the body, must be disposed of by evaporation of perspiration from the skin. (Courtesy "Heating and Ventilating.")

drastic change of temperature when he leaves the work place.

In many parts of this continent, summer temperature alone may effect health and efficiency. However, when the heat released by many industrial processes combines with the heat of summer, the working environment may present serious problems. Sometimes the body is not able to get rid of the heat as fast as it is produced and the body temperature rises. If the exposure is prolonged, serious effects may result. These effects may range from temporary discomfort to heat stroke. But even at the lower levels of exposure, where the danger of heat stroke is not serious, heat may be directly responsible for uncomfortable working conditions, and indirectly responsible for reduced efficiency and production and increased absenteeism and accident rates.

Body temperatures are the result of two factors—heat production and heat loss. The food consumed by the individual tends to maintain the body's temperature well above that of normal surrounding areas. This is offset by radiation, conduction and evaporation. In a

healthy person, the heat regulating mechanisms can function automatically over a fairly wide range of temperature and humidity. But even among healthy persons there are wide variations in endurance.

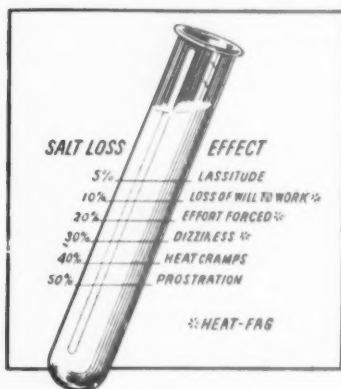
There are four factors which influence the body heat balance:

1. Air temperature
2. Air velocity
3. Moisture content of air
4. Mean radiant temperature of the solid surroundings

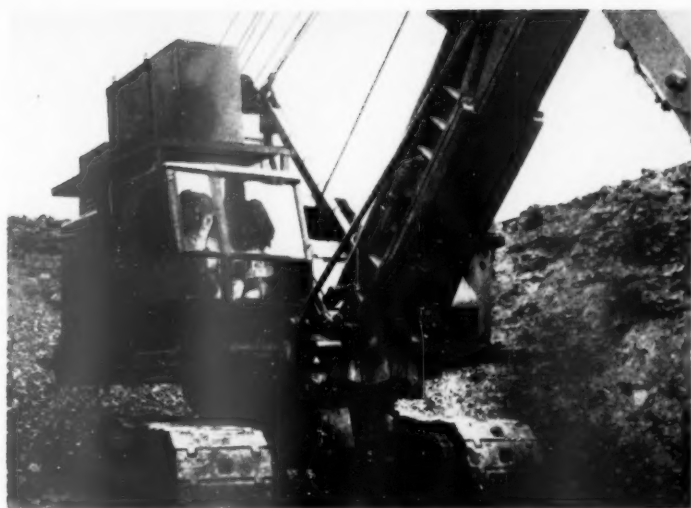
Wherever there is a heat problem there is usually a combination of these factors. For example, the effects of high temperatures are frequently intensified by high humidity.

Industrial heat exposures may be classified as hot-dry, or warm-moist.

Hot-dry exposures are most common. These are found in the glass, steel, tin plate, and other industries where air and wall temperatures are raised but the moisture content is not increased above that of the outside air. When the air is dry, the heat load imposed on the individual may be offset by evaporation of sweat from the skin. Such environment



Effect of increasing salt losses from the human body.



Under a blazing sun, the cab of a locomotive crane can become unbearably hot. This crane has been equipped with an air conditioning unit similar to those used with overhead cranes. (Dravo Corp.)

may cause acute discomfort but acclimatization and adequate intake of water and salt enable many individuals to tolerate such conditions. Temperatures as high as 150 F can be endured for short periods.

Warm-moist exposures are much more troublesome. In some regions this may be a normal summer condition for days or even weeks at a time. They are created artificially in such operations as dye-shops, laundries, some textile operations, and in mines. As a result of added moisture, the air may be practically saturated with water vapor. Under such conditions, the amount of sweat that a man can evaporate to the air is very limited, and the exposure is inevitably hazardous. Temperatures exceeding 90 F with humidity approaching the saturation point can be endured by few individuals for prolonged periods. Air velocity, induced by fans or blowers becomes increasingly ineffective as temperature and humidity rise.

Diversion of blood from internal organs to the surface capillaries to aid in the cooling process has an injurious effect. In addition to placing an extra load on the heart, stomach, lungs and

other vital organs may be affected. Persons performing physical labor in hot atmospheres lose considerable amounts of sodium chloride from the body through perspiration. Cramps may result unless the salt is replaced through food or drinking water or salt tablets.

In studying upper temperature limits for work, many factors must be considered. These include the nature of the work itself and the amount of physical exertion involved. The physical and mental fitness of the worker must also be considered, remembering that many of them are in the older age groups and even younger persons

may not be at the peak of physical fitness. Diet, water and salt intake, and clothing are also factors in minimizing the effects of heat.

When men are at rest, clothing may offer appreciable protection for short periods. Resistance of clothing to radiation is affected considerably by its color. Bright metallic surfaces are reflective and offer greatest protection against radiant heat from sun or furnace. Resistance of clothing to convection depends chiefly on its thickness. The weave is less important.

Air movement helps to increase heat loss by convection and evaporation. The relief is obtained by the movement of hot humid air from near the body surface and replacing it with cooler and relatively dryer air. Tests have shown that air movement of 200 FPM will reduce the effective temperature of still air one to two degrees. Velocities up to 500 FPM have been used with no apparent discomfort or ill effect.

General exhaust ventilation helps to reduce the heat load where the heat source is spread over a wide area. However, in regions where high temperatures and high humidities prevail for long periods, the general ventilation without artificial cooling and dehumidifying affords comparatively little relief.

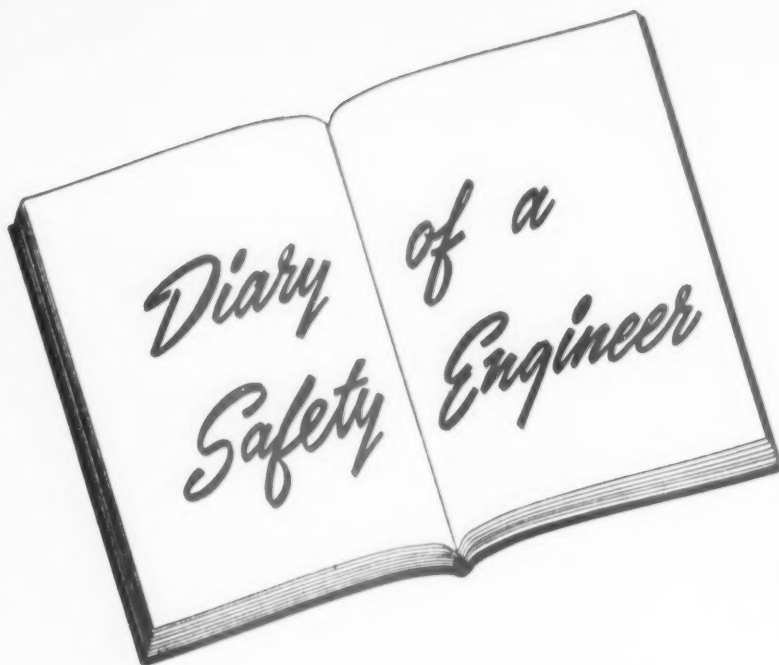
When a source of heat is concentrated on a small area, local exhaust hoods may help. These

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TABLE I—BODY HEAT PRODUCTION OF AN AVERAGE MAN DURING DIFFERENT DEGREES OF ACTIVITY

Activity	Body Heat Production Btu per Hour
Sleeping	255
Awake, quiet	300
Seated, at rest	380
Standing, at ease	430
Walking, 2 mph	760
Walking, 3 mph	960
Walking, 4 mph	1400
Maximum exertion	3060-4800

From "Industrial Heat Exposures," Haines and Hatch,
Heating and Ventilating, Nov. 1952.



The Chain of Error

(Fiction)

By BILL ANDREWS

May 4, 1953.

When I was a kid I liked the kind of puzzle that was stated: "Change cold to warm in four steps." The game was to change one letter in the original word, *cold*, at a time, but always leaving a real word, not just a jumble of letters. The object was to arrive at the end word, in this case, *warm*.

The solution, of course, runs:
COLD
CORD
CARD
WARD
WARM.

In the last week I've been trying to unscramble some safety in-

formation that, in the course of its dissemination through the company, has gone through precisely the same kind of reversal of sense, by a step-by-step process which at each stage left the information apparently making sense.

The results were so nearly catastrophic, and the process of gradual distortion of ideas was so interesting, that I took the trouble to run down the whole course of change, and it is worth filing as a reminder the next time I start spreading truth casually.

What I said originally to Harry Dexter was, "I want you to get the word out to all departments

concerned that the XYZ solvent used in degreasing, though it is less toxic than the JKL solvent used prior to April, is nonetheless not to be used without properly vented hoods until we can determine in each individual location the possibility of local modifications of the rule. The XYZ, like the JKL, is non-flammable, and needs no special precautions in storage as far as fire danger is concerned."

Harry, more careful than I was, committed this to writing, making only one change, the addition of the words "which you have been using" after the name "JKL" in the sentence that began, "The XYZ, like the JKL, is non-flammable." He also wrote a departmental distribution list for the memo and handed it to the typist. She typed the memo, making only one mistake. Where I had said, "not to be used without properly vented hoods until we can determine," she wrote, "until we have determined."

There was one other error involved in the spread of this information before the memo left my department. Neither I nor Harry had accurately checked the solvents used in the various departments, assuming that JKL was standard throughout the plant until XYZ came in. Actually, there was one department on the distribution list which had a supply of flammable solvent in use.

The course of further magnification of error took a different course in two different departments. The foreman of the department using flammable solvent called a supervisor's meeting, at which he reported accurately the first part of our memorandum. But on flammability, he said, "The XYZ is non-flammable, like JKL and unlike the solvent which you have been using." But one of his supervisors, naturally enough, failed to catch the *un* in "unlike," and reported to his help, "The XYZ is non-flammable, like JKL and like the solvent we've been using."

So, a day or two later, when the

supply of new solvent was exhausted, the degreasing machine operator sent a helper for some of the old solvent. When the helper brought it back, he said, "Don't this stuff burn?" The operator, being busy, said, "Nope. The boss says they've changed solvents, and anyway they must have been wrong about the old stuff. It didn't burn, either. Foreman told us so Tuesday."

So the helper, a new hand, decided that "Flammable" must mean something else than burnable.

Fortunately, singed eyebrows aren't compensable injuries, and sears don't always produce lost time. But they tell me the column of flame was quite a sight, and that in fact, if not in terms of Standard National Safety Council accident reporting procedure, the department lost a good half hour of time before the employees got over their alarm and got back to work.

So much for the Chain of Error, Branch 1.

Now let's return to the other department, which read the part of the memo that says, "... the XYZ solvent used in degreasing, though it is less toxic than the JKL solvent used prior to April, is nonetheless not to be used without properly vented hoods until we have determined the possibility of local modifications of the rule."

As the department head reworded the memo for distribution in writing to his supervisors, this part read, "The XYZ solvent is less toxic than the JKL solvent we've been using, but you'd better not use it without properly vented hoods." He stated under questioning that he thinks he went on to read the word "until" right after "hoods," but his steno didn't hear him that way. She put a period after "hoods" and started a new sentence, "We have determined the possibility of local modifications of the rule."

As nearly as the people involved can remember, this statement went through a further modification at the hands of a sub-foreman, who

told his men, "This XYZ stuff is a lot less toxic than the stuff we've been using. It's better not to use it without special hoods, but some places the rule has been modified."

And, in the final form in which it was told to a helper by a machine operator just before he came down with stomach cramps and edema, our instructions were quoted:

"This stuff ain't poisonous. Some places they're still using hoods on it, but they've checked up and found it's all right here without a hood."

And so, Branch 2 of the Chain of Error—this time with three days of lost time as the price to pay for a lesson in the fine art of getting ideas spread through a large plant.

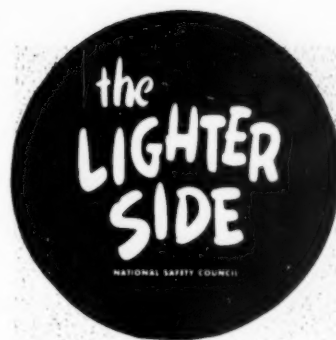
You can't blame anybody—or rather, you have to blame everybody. At each stage, beginning perhaps with some unfortunate choices of words by me, every person who forwarded the information made a slight change in it, and by the time the end of the chain was reached, the meaning of the information had been precisely reversed.

I don't know the answer. It may be a problem for the word-slinging boys, or maybe it means that we should have a rigorous system of word-for-word copies of memos, everything in writing. Yet, darn it, I want people to adapt general information to specific departmental situations.

The process is subtle, because it does not depend on a single change made by one person, but on the cumulative effect of many changes. Safety information, like gossip, travels fast and far, and like gossip quickly loses any close likeness to the original version of the story.

* * *

Postscript: This evening, as I was deep in thought, Sue was talking over her sewing and I was answering her rather absently, as I tried to read the paper. Suddenly, there was a loud wail from my son, who had been playing on



the floor. He said, in a voice of agony, "Daddy, don't hate mommy!"

After we had got him calmed
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41st Congress Coming

SAFETY MEN from all over the United States and Canada will gather in Chicago October 19-23 for the 41st National Safety Congress and Exposition.

This year Congress sessions will be held in seven hotels—Conrad Hilton, Congress, Hamilton, LaSalle, Morrison, Blackstone and the Palmer House. The entire

Safety Exposition will again be held in the Conrad Hilton. There will be over 200 Congress Meetings this year.

Listed below are the dates and hotel assignments for all sectional, divisional, subject and general sessions.

DATES AND HOTEL ASSIGNMENTS

	(Hotel)	Oct. 19 Monday		Oct. 20 Tuesday		Oct. 21 Wednesday		Oct. 22 Thursday		Oct. 23 Friday AM
		AM	PM	AM	PM	AM	PM	AM	PM	
Sectional Sessions										
Aeronautical Ind.	Hamilton		X				X			
Air Transport	Hilton			X						
Auto. & Mach. Shop	Congress				X				X-jt.	
Cement & Quarry	Hamilton				X		X		LX	
Chemical	Hilton		X		X		X			
Coal Mining	Hilton		X		LX		X		X	
Commercial Vehicle	LaSalle			X	X	X	X	X-jt.	L	
Construction	Hamilton			X	X	X	X	X	X	
Electrical Equip't.	Hilton						X			
Fertilizer	Hamilton						X		X	
Food	Morrison				X		LX3		X	
Glass & Ceramics	Congress		X		X					
Industrial Nursing	Hilton			X		X			L	
Marine	Morrison				X	X	X	B	LX	
Meat Pkg.—Tng. & L.	Congress		LX		LX2					
Metals	Hilton		X		X		L		X3	
Mining	Hilton		X		LX		X		X	
Petroleum	Hilton		X		X3		X2		X	
Power Press	Congress						X		X-jt.	
Printing & Publ'g.	Hilton				X		X			
Public Employee	Hilton				X		LX		X	
Public Utilities	Hilton-									
	Hamilton				X				X4	
Pulp & Paper	Hilton		X		X		X3		LX3	
Railroad	Morrison				X		X		X	
Rubber	Hilton				X		LX			
Textile	Congress		X		X					
Traffic	Congress		X	X	X	X	X	X	X	
Transit	LaSalle		X	X	X	X	X	X-jt.	L	
Wood Products	Congress-									
	Hilton		X		X4		X			
Divisional Sessions										
Farm	Palmer									
	House					X	X	X	X	
Home	Hilton			X		X				
School & College	Morrison		X	X	X	X	X	X	X	
Women's Activities	Blackstone				X					
ASSE—Subject Sessions										
ASSE Ann. Mtg.	Hilton			X						
Subject Sessions	Hilton & Congress					X		X		X
General Sessions										
Annual Council Mtg.	Hilton	X								
Banquet	Hilton						XEve.			
Early Morn. Sess.	Hilton			X		X		X		X

X One session

X3 Three group sessions

L Luncheon

X-jt. Joint session, two or more Sections

B Breakfast meeting

THE SAFETY VALVE



In the Day's News

THE PINK FIRST PAGE of a Detroit newspaper of recent date carried the screaming headline, "Starts Machine to See What Would Happen: CEMENT MIXER MURDER!"

The story that follows gives the gruesome details of tragedy resulting from horseplay. A 28-year-old worker (chronological age) flipped the switch of a giant cement mixer in a concrete products plant and a worker who had gone in it to make some adjustments was sliced to death by the whirling mixer blades.

There is always the danger of doing somebody an injustice in judging a case on the basis of newspaper reports alone. Reporters are not trained accident investigators and details not mentioned might present the affair in a somewhat different light. Nevertheless, it looks as though something was radically wrong at this plant.

The man who flipped the switch confessed that he wanted to see how it would run with a man inside it. Then he got nervous and couldn't stop it. There had been some horseplay earlier.

As usual, there was a combination of circumstances leading up to the tragedy. No padlocks for switches, and apparently the lack of supervision so often found in small plants.

The offender had been with the company about two years. He confessed that several weeks before he caused another workman's finger to be cut off by one of the whirling mixer blades.

It's hard to believe that he got that way in a few weeks. In two years there must have been plenty of signs that the plant had a menace on the payroll.

* * *

And on the front page of this edition was another story of a kind that is altogether too frequent—the home fire. This one had the elements of a mass tragedy—a can of gasoline and kids playing with matches. Miraculously, nobody was fatally burned and the house was saved.

* * *

One of the requirements for a Boy Scout Safety Merit Badge is a collection of newspaper stories about accidents. As an examiner for many years I found that the boys invariably knew the answers

to the questions in the manual but few of them gave serious thought to the clippings. But occasionally a youngster with an original and investigating mind would classify the stories, mount them neatly in an album, and write in comments as to causes and how they could have been prevented.

Those boys learned a most important fact—that there's a lesson to be learned from every accident story.

Dominus Regit Me

*God governs, guides, controls, maintains,
Upholds, enfolds, defends, sustains,
Keeps safe from harm, preserves, protects,
And lovingly each step directs.*

Madeleine Moschenross
Hillside, N. J.

In This Issue . . .

IF YOUR WORKERS seem to be showing abnormal resistance to safety ideas, you may find consolation in the leading article. In dealing with native labor in the construction of bases in Morocco, military safety engineers encounter not only language difficulties but also strange oriental attitudes toward life and death. (Page 18)

* * *

Lightning ranks far behind motor vehicles, falls and a score of other agents as a cause of sudden death. The menace isn't serious enough to spoil a vacation, nor slight enough to neglect reasonable precautions. You don't need to hide in the basement during a storm but don't use a tree for an umbrella. (Page 20)

* * *

Are safety engineers impractical? Are they meeting-happy? Charles R. Zeskey, Jr., weighs these frequently made charges and gives his fellow safety engineers some pungent warnings. (Page 22)

* * *

Norval Burch, who traveled several thousand miles on MATS planes and visited air bases throughout the Orient, presents the second of three articles on the ground safety program of this gigantic airlift. (Page 26)

* * *

The need for systematic maintenance of complicated, expensive machinery is generally recognized. But no machine is as complicated as a human being. Dr. W. E. Parks points out. People need maintenance, too, and the safety engineer, physician and nurse all have an important part. (Page 32)

Carman Fish

SMALL BUSINESSES and ASSOCIATIONS



By A. M. BALTZER

Director, Small Business and Associations Program, NSC

Catch Them Early

LAST MONTH, reference was made to the American Medical Association's plans to encourage cooperative health and medical service for small companies. Now, we are also reaching the medical students.

Recently Bob Gidel of the Industrial Department staff and your reporter split up an hour's lecture before a group of third year medical students at the Chicago Medical School. Many of the 40 students will be going into industry, government work and the rest into research or private practice, but it was apparent in the question period which followed that few of them had given any thought to cooperative medical services for small companies or to the many other relationships between medical and safety work.

We pointed, with considerable pride, to the many technical and educational publications prepared by the Council in collaboration with the American Medical Association, the American Hospital Association and outstanding doctors. For instance, several of our safetygraphs on back injuries and first-aid not only were approved by medical experts but we have heard that a number of doctors are using these visual aids to explain the nature of injuries to their patients.

Maintained with Safety

The American Institute of Baking again asked your reporter to discuss accident prevention with

about 35 bakery men taking the Institute's course on bakery equipment maintenance. The Institute recognizes that, in most bakeries, the maintenance man is in the best position to eliminate physical hazards and has a good working relationship with supervisors responsible for safe work habits. Our approach to this group is first to convince the maintenance engineers that safety pays, to show how they can do something about accidents and then to offer suggestions on where to get help.

Safety is an integral part of the training course shop work too. In the Institute's model bakery, both

old and new machines are equipped with the best guards, including removable guards to permit convenient maintenance without sacrificing safety. The Council's visual aids are used in both shop and lecture sessions, and safety promotional material is distributed to students through the Institute's association membership.

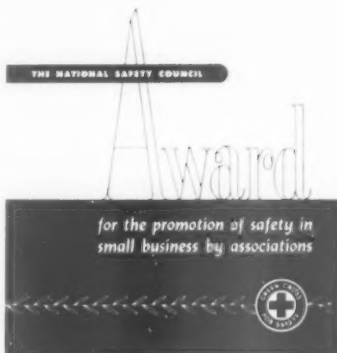
Launderers' Program Rolling

The Institute of Industrial Launderers, mentioned in previous reports, is rapidly expanding its safety program which is built around its public relations and sales effort. In the space of one month's time five regional conferences in New York, Los Angeles, Chicago, Cleveland and Kansas City included a full half day on accident prevention—about a third of the available time. There was considerable discussion as to how industrial safety men and launderers could help each other to promote good housekeeping and to reduce fire losses and dermatitis due to oily work clothing and wiping cloths.

The Institute has a group membership in the Council which means that it can redistribute Council material to its members. Moreover, some of its members are distributing posters on good housekeeping and oily work clothing to their industrial customers. The Institute will also work with the Council in developing an even wider selection of posters and technical material on the maintenance of work clothing, the flameproofing of garments and general good housekeeping.

Over 95 per cent of the Institute's members employ fewer than 100 persons, and their fire and employee safety record has been far from satisfactory. Their program, therefore, is a double-barrelled approach aimed at reducing injuries to their own employees and serving the interests of their industrial customers.

The best way to break a bad habit is to drop it.



Rules on the Council's new award for association safety activities are announced in a four-page brochure. Copies have been sent to 200 association members of the Council, to 1400 members of the American Trade Association Executives, to all sectional general chairmen and to association liaison committee chairmen. It will be sent to anyone interested in securing recognition for association safety activities in behalf of small business.

"We've reduced our scrubbing time from 70 to 7 man-hours . . . and our floors have never before been so clean!"

— says Foreman of
BURNY BROS. BAKERY, CHICAGO



Garage and stockroom floors in Burny Bros. large, modern bakery get daily scrubbing with a Job-Fitted Combination Scrubber-Vac and Setol Cleanser

THEY'RE an unbeatable team to speed the cleaning of oily, greasy floors. Here's why: A Scrubber-Vac completely mechanizes scrubbing. It applies the cleanser, scrubs, flushes if required, and damp-dries the floor—all in one operation! Job-fitted to specific needs, a Scrubber-Vac provides the maximum brush coverage consistent with the area and arrangement of the floors. Its teammate, Setol Cleanser, is specially designed for the greater speed of combination-machine-scrubbing . . . emulsifies grimy oil and grease instantaneously for fast, thorough removal by the machine's powerful vac. Moreover, Setol retains its strength longer than average alkaline cleansers. This, too, speeds the cleaning process . . . saves on materials . . . and cuts operating

time of the machine, which in turn reduces labor costs. The Scrubber-Vac shown above is Finnell's 213P, for heavy duty scrubbing of large-area floors. It has a 26-inch brush spread, and is capable of cleaning up to 8,750 sq. ft. per hour! Finnell makes sizes for small, vast, and intermediate operations (available on lease or purchase plan) . . . also a full line of fast-acting cleansers. In fact, Finnell makes everything for floor care! Find out what you would save with combination-machine-scrubbing. For demonstration, consultation, or literature, phone or write nearest Finnell Branch or Finnell System, Inc., 2205 East Street, Elkhart, Indiana. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

Originators of Power Scrubbing and Polishing Machines



**BRANCHES
IN ALL
PRINCIPAL
CITIES**

Emotional Safety Valves

Observations on incidents and people from
the Diary of an Industrial Physician

By DR. H. P. DASTUR

FRUSTRATIONS within us imperil our mental balance. They have, however, a way of projecting themselves on things outside us to enable us to regain our equilibrium. Three things that come in handy this way are food, weather and the first subordinate, dependent or underdog who may have the misfortune to cross our path.

Dr. Tredgold in his book on *Human Relations in Modern Industry* relates the story of the manager who had a tiff with his wife at the breakfast table and came out second best. That morning he went to his office with a ruffled temper, looked out for some irregularity, found one, blew up his secretary over it, and soon after regained his mental balance. The secretary repeated the process on the typist, and the typist on the office boy.

But what was the poor office boy to do? He had no subordinate. Fortunately, a cat crossed his path. He kicked her and that restored him in his own self-esteem.

Now for my own experience. The canteen supervisor made a grievance that for some time some workers were persistently lodging frivolous complaints against him. The same workers about the same time were carrying on protracted discussions with the manager regarding some change the latter was proposing to introduce in

their work, and were feeling frustrated over this and projecting their frustrations on to the canteen.

It was difficult to convince the supervisor about this. He would insist on rubbing it into them that 80 per cent of their complaints were based on wrong facts, and that he was not responsible for the remaining twenty. It is bad enough to lose an argument with the manager, but that a petty officer should also dare to score over them was too severe a blow to their self esteem. So they marched in a body to the labour office asking for the blood of the canteen supervisor, and not getting it, they abused the labour officer to their heart's content. A few days later some members of the group manhandled the canteen superintendent.

Dr. Tredgold winds up the story about the manager with a suggestion that it would not be a bad idea for the company to present the manager's wife with a fur coat if she would undertake not to disturb her husband's mental balance before he starts for office. But would the good lady sign such a contract? Even if she did she would fail if she happened to be a bossy type and a law unto herself. But if she were open-minded and businesslike she would interest herself in methods of preserving family peace, adopt them and succeed.

Similarly, it may be worth while to try out a few things in the factory which may make workers happy their way. This perhaps may tempt them to behave better. But the manager, Mr. Boss, says, no. He can cite half a dozen cases

where privileges given were followed with go-slow tactics. But the manager, Mr. Leader, says, yes. It is his experience that that raises the workers' morale, which is a gain.

* * *

I approached a supervisor for advice on how best to prevent a particular type of accident on his machines. He, however, thought that I was only pampering and spoiling the workers. He reminded me that while formerly they were doing their work standing, at my suggestion they are now provided with seats. Should they not show some gratitude and do better work? he asked. I suggested that some of the things we do for them they may not be wanting, and some others they may be wanting very badly, but not as charity, and if we do things without considering their feelings they naturally are not interested in our efforts. Are we still to expect gratitude from them? I asked.

To that he retorted that not only did they show no gratitude, but they are actually doing less work than before. They have adopted go-slow tactics. I asked if rationalization schemes can have any connections with go-slow tactics. He quickly retorted that rationalization is absolutely necessary for the survival of industry. But my further question as to what happens if workers think that go-slow tactics are necessary for their survival, he circumvented by saying that his opinion was shared by his departmental head and his other colleagues.

I promised to talk it out with them too. But my arguments made

—To page 112

Dr. H. P. DASTUR is Medical Officer, Tata Industries Limited, Department of Industrial Health, Bombay, India. This is the second installment of "The Diary of an Industrial Physician," which appeared originally in the *Proceedings of the Society for the Study of Industrial Medicine*.



In A Fire Emergency...

ALL HANDS ARE "SKILLED HANDS"

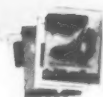
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With Ansul Extinguishers near-expert results are obtained by inexperienced operators. In fact, all Ansul Extinguishers are designed to provide a maximum of extinguishing effectiveness in the hands of inexperienced personnel.

This feature, plus benefits listed below, account for the outstanding preference for Ansul Equipment by fire protection men in all phases of American industry.

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- 5 Ansul "PLUS-FIFTY" Dry Chemical used exclusively.
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- 7 Greater fire-stopping power.
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National Safety News, May, 1953

NATIONAL SAFETY COUNCIL

AUDITOR'S REPORT—1952

To the Board of Directors, National Safety Council:

We have examined the balance sheet of NATIONAL SAFETY COUNCIL (an Illinois corporation organized not for profit) as of December 31, 1952, and the related statements of income and expense and changes in net assets employed for the benefit of members for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We had made a similar examination for the year ended December 31, 1951.

In our opinion, the accompanying balance sheet and statements of income and expense and changes in net assets employed for the benefit of members present fairly the financial position of National Safety Council as of December 31, 1952, and the excess of income over expense for the year ended, and were prepared in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

ARTHUR ANDERSEN & Co.

Chicago, Illinois, March 17, 1953.

BALANCE SHEET — DECEMBER 31, 1952

ASSETS		LIABILITIES	
CURRENT ASSETS:		CURRENT LIABILITIES:	
Cash, including \$73,964 held by Trustees	\$ 396,724	Accounts payable—trade	\$ 74,701
U. S. Government securities—Savings bonds, at redemption value	\$355,940	Employees' income taxes withheld, etc.	30,919
Treasury bonds, at cost (market value \$15,502)	15,313 371,253	Deferred income—unfulfilled membership and service contracts	732,000
Accounts receivable, less allowance for doubtful accounts of \$11,400....	418,905	Total current liabilities.....	\$ 837,620
Inventories, at approximate cost which is not in excess of market—		CONTRIBUTIONS AND APPROPRIATIONS FOR SPECIAL PROGRAMS	
Publications and merchandise.....	\$464,616		100,719
Raw materials and supplies.....	57,608 522,224	RESERVE FOR CONTINGENCIES.....	
Total current assets.....	\$1,709,106		200,000
DEFERRED CHARGES	88,843	NET ASSETS EMPLOYED FOR THE BENEFIT OF MEMBERS	
FIXED ASSETS, at approximate cost:			985,611
Gross Reserves			
Furniture and fixtures.....	\$145,956 \$ 38,349		
Printing machinery and equipment	37,270 19,965		
Leasehold improvements..	242,520 41,431		
	\$425,746 \$ 99,745 326,001		
			\$2,123,950
			<u>\$2,123,950</u>

STATEMENT OF INCOME AND EXPENSE FOR THE YEAR ENDED DECEMBER 31, 1952

INCOME:	
Dues, publications and services.....	\$3,034,483
Contributions	538,023
Other income	43,655
	<u>\$3,616,161</u>
EXPENSE:	
Publications and materials.....	\$1,302,349
Technical and research.....	730,145
Administrative and general office (including \$26,462 of depreciation and amortization)	582,557
Membership, advertising and services.....	311,919
Local chapter and council development.....	154,452
Publicity	144,152
Contributive fund solicitation.....	99,078
	<u>\$3,324,652</u>
EXCESS OF INCOME OVER EXPENSE.....	\$ 291,509

STATEMENT OF CHANGES IN NET ASSETS EMPLOYED FOR THE BENEFIT OF MEMBERS FOR THE YEAR ENDED DECEMBER 31, 1952

Balance at December 31, 1951.....	\$ 794,102
Add—Excess of income over expense, as above.....	291,509
	<u>\$1,085,611</u>
Less—Appropriation to reserve for contingencies.....	100,000
Balance at December 31, 1952.....	<u>\$ 985,611</u>

“What will the telephone
be like
when I grow up?”



It's hard to say, young fellow, but you can be sure there are great things ahead.

Today we telephone from moving automobiles, trains, airplanes and ships far out at sea. And radio microwaves beam telephone calls and television programs from tower to tower across the country.

The day is coming when you will be able to reach any telephone in the country simply by dialing a number.

Perhaps some day in the future you may just speak the number into the transmitter and get your party automatically.

BELL TELEPHONE SYSTEM

*The Best Possible Service
at the Lowest Possible Cost*





Atomic Energy and Fire Protection

By EDWARD J. KEHOE

THE important things to know about atomic energy are what radioactivity is, where it is most likely to be encountered, how dangerous it is, and what precautions, if any, are necessary in coping with it.

From the production viewpoint, the plants and laboratories associated with our atomic energy program have very much the same safety problems as are encountered in the chemical and construction fields, plus the risks added by the factor of radiation. The effects of

**Methods effective for conventional fires
are also helpful against the A-bomb**

an atomic bomb explosion are fairly similar in nature to, although certainly greater in degree, than the destructive effects of conventional high explosives, plus the added effects of radiation. Just what, then, is radiation?

The radiation we are concerned with is an effect produced by the disintegration of atoms, a mechanism used by nature to achieve a nuclear balance. A somewhat similar phenomenon is that of water seeking its own level to accomplish a mechanical balance. The effect of radiation on the

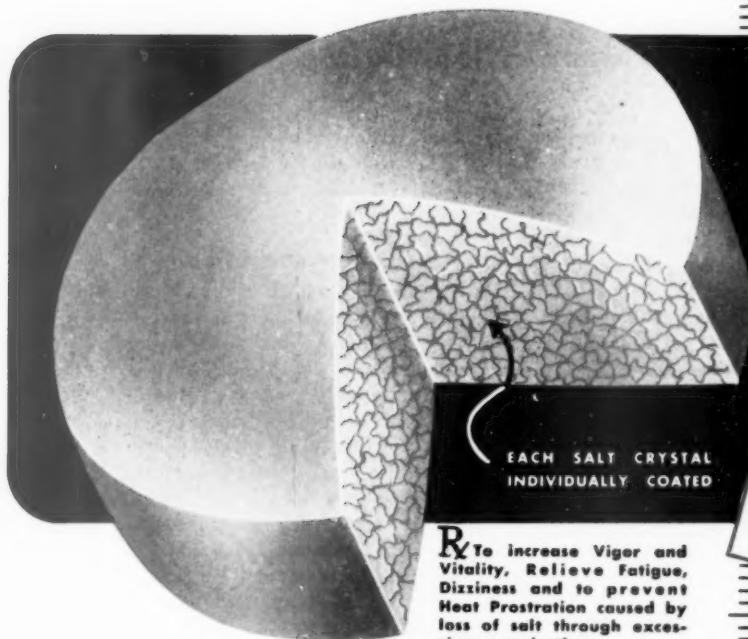
human body is that it attacks the living cells. (A cell ordinarily recovers from light damage but severe injury may cause it to die.) If sufficient cells are destroyed or badly damaged, the person is severely injured or dies. However, the important point is that an extremely severe exposure to radiation is necessary to actually cause death.

To say simply that something is "radioactive" does not mean that it is necessarily lethal or that it is to be feared. To say that some-

—To page 103

EDWARD J. KEHOE is Chief, Fire and Accident Branch, New York Operations Office, U. S. Atomic Energy Commission. This article was presented at a meeting of the National Fire Protection Association, Houston, Texas, December 3, 1952.

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PEP-UP IMPREGNATED **salt tablets**

EACH SALT CRYSTAL
INDIVIDUALLY COATED

Rx To increase Vigor and
Vitality, Relieve Fatigue,
Dizziness and to prevent
Heat Prostration caused by
loss of salt through exces-
sive perspiration.

*Will not cause
Nausea or
Stomach Distress*

Releases Salt Immediately!

(Not Enteric Coated)

- Controlled (slow) dissolving eliminates nausea.
- Starts dissolving immediately.
- Dissolves completely in about 100 minutes.
- No delay in getting salt into system.
- Withstands high temperatures and rough handling.
- Can be stored for long periods without deteriorating.
- Will not absorb moisture from air and clog dispensers.
- The Formula used for producing Impregnated Salt tablets was developed at the United States Naval Medical Research Institute. The tablets meet government specifications for Type III, Class C Impregnated Salt tablets (specifications set forth in Federal Standard Stock Catalog No. SS-S-31d, Section IV (part 5), dated September 11, 1951).
- Write for literature and prices.

Expendable Dispenser

PEP-UP Im-
pregnated Salt
Tablets come
to you in sani-
tary, factory-
sealed Dis-
pensers at no
extra cost.
**T H R O W
A W A Y D I S -
P E N S E R
W H E N E M P T Y .
H A N G U P A
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Save the expense of pur-
chasing, servicing and replac-
ing individual dispensers.



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GREEN CROSS NEWS



Activities of Local Safety Councils and Chapters

Compiled by TOM A. BURKE

Director of Local Safety Training, Field Organization, NSC

First Managers' Institute Is Great Success

The First Annual Institute for Safety Council Administration, held at N.S.C. headquarters in Chicago March 16-21 inclusive, was an outstanding success in the opinion of the 15 managers who attended the intensive 5½ day course.

The program was carefully designed by the Field Organization to give those in attendance thorough basic training in all the important phases of local council management, with particular emphasis on financial procurement, program and general administration.

The faculty was made up of Field Organization members, senior local council managers and departmental heads from the N. S. C. staff. Franklin M. Kreml, of NUTL, and J. W. Bethea of the National Committee for Traffic Safety were guest lecturers.

Those participating as instructors from the Field Organization were Earl F. Campbell, Edwin S. Smith, Noble Dutton, Tom A. Burke and Ralph Robinson. Mr. Dutton served as "Dean" of the Institute, directing the sessions. Joseph E. Lovvorn led the finance discussions.

Departmental instructors were Paul H. Coburn, Motor Transportation; David M. Baldwin, Traffic; Thomas Fansler, Home; Harry Porter, Annual Inventory; Robert J. Shinn, "Operation Safety;" Paul Jones, Public Information; Marian Telford, School and College; Maynard Coe, Farm; Gene Miller, Statistics and Charles F. Alexander, Industrial Safety.

Senior managers who served as instructors included Walter D. Ladd, St. Joseph, Mo.; Robert B. Leopold, Atlanta; Joseph M. Kaplan, Los Angeles; Harold F. Lillie, Lansing; Clinton W. Dreyer, Oakland; W. Russell Hicks, Hamilton, O.; Dan Hollingsworth, Oklahoma City, and J. James Ashton, Wilmington.

Graduation certificates were awarded by Earl F. Campbell at the Saturday luncheon. President Dearborn addressed the group on Tuesday morning.

The "students," including one who was also an instructor, were Bus Feay, executive secretary, Sioux Falls (S.D.) Safety Council; W. Russell Hicks, director, Hamilton Safety Council; Charles Hopkins, managing director, West Virginia Safety Council, Charleston; William H. Keeler, director, Rochester Safety Council (N.Y.); Mrs. Lovilla Lalor, executive secretary, San Joaquin County Safety Council, Stockton, Calif.; Forst E. Lowery, secretary-manager, Greater Minneapolis Safety Council; Myron Prosser, manager, Safety Council of Greater Youngstown; Robert Richards, assistant manager, Greater Grand Rapids Safety Council; Paul W. Seibert, managing director, Seattle-King County Safety Council; Gerald W. Shipman, director, Twin Cities Area Safety Council, St. Joseph, Mich.; Eugene L. Simm, Greater Atlanta Safety Council; George T. Simmons, Montgomery County Traffic Commission, Montgomery, Ala.; Robert M. Sorenson, executive secretary, Racine County Safety Council, Wis.; James K. Williams, manager,

Safety Council of Western Massachusetts, Springfield; and Walter D. Ladd, St. Joseph (Mo.) Safety Council.

Procedures Group Meets

A detailed report on the development of local and state council activities was given by Earl F. Campbell, director, Field Organization and Eastern and Western Regional Directors, Edwin S. Smith and George D. Eastman, at the Spring meeting of the Procedures Committee, Conference of Local Safety Organizations, held in Chicago on March 20.

There are now 86 chapters of which 11 are state organizations. They are located in 43 states and 2 Canadian Provinces. In addition there are 110 councils that are members of N.S.C. although not chapters. Also there are non-member organizations in many areas.

The report showed that of the 25 urbanized areas in the country having more than 500,000 population, 23 now have community safety organizations. Also 36 per cent of the urbanized areas in the 100,000-250,000 population group are now working through local councils or chapters. Currently 23 states have state safety councils operating a full-time staff.

Other subjects discussed by the Procedures group included the problem of national and local fund raising, program expansion, the retirement income project for chapter employees; plans for holding the N.S.C. Industrial Safety Institute in various chapter cities; and the development of a standard

—To page 152



You could know the plant... 20 years of steady growth... 20 years of work, brains and money... then in 20 minutes a little fire got away and reduced it all to nothing.

But, your larger size fire hazards can be protected very efficiently at a reasonable cost, thanks to C-O-TWO Low Pressure Carbon Dioxide Type Fire Extinguishing Systems. Simple piping, running from one centrally located storage tank, instantly transports clean, non-damaging, non-conducting carbon dioxide anywhere in the plant area... to flammable liquids, electrical equipment, storage spaces, manufacturing processes and record vaults. Fire at any protected location is extinguished in seconds with an absolute minimum of expense and interruption.

Flexibility is the keynote with these C-O-TWO Fire Extinguishing Systems... the low pressure carbon dioxide

storage tanks range in capacities from one to fifty tons... discharge facilities can either be manual mechanical, manual electric, automatic mechanical, automatic electric or a combination of these... especially installed to fit your particular needs. Future plant expansion is easily and economically provided for by initially installing an oversized low pressure carbon dioxide storage tank and adding the supplementary discharge facilities at a later date.

Whether it's fire detecting or fire extinguishing... portables or built-in systems... C-O-TWO means experienced engineering that assures you of the best type equipment for the particular fire hazard concerned.

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AFFILIATED WITH PYRENE MANUFACTURING COMPANY



Each Work saver operator at Caterpillar Tractor Company receives a copy of this booklet when he reports on the



job for the first time. At right is a specimen page of the booklet which presents instructions for safe operation.

Cartoon Booklet Teaches Operators

Materials On-the-Move with Worksavers, a cartoon-type handbook, is now an important part of a highly developed educational program to reduce injuries to employees handling floor-operated, battery-powered hauling and lifting units at Caterpillar Tractor Company. The booklet was prepared with the cooperation of Yale and Towne Manufacturing Company, manufacturers of the trucks.

Coupled with many meetings held to promote safe operation, this booklet immediately showed a 32 per cent drop in the Work-saver accident frequency during the period covering the last four months of 1952 over the first eight months of that year. For the last third of the year the accident frequency per million man-hours of

operation with Worksavers was 4.43. During the first two-thirds of the year this rate had been 6.62.

The monthly frequency has dropped steadily since the book was first distributed. During the first eight months of 1952, the accident frequency had reached as high as 8.54. This was in March. In September, the first month the campaign was in progress, and the booklet distributed, the rate dropped to 6.40. This slipped to 4.92 in October, 3.33 in November, and 3.30 in December.

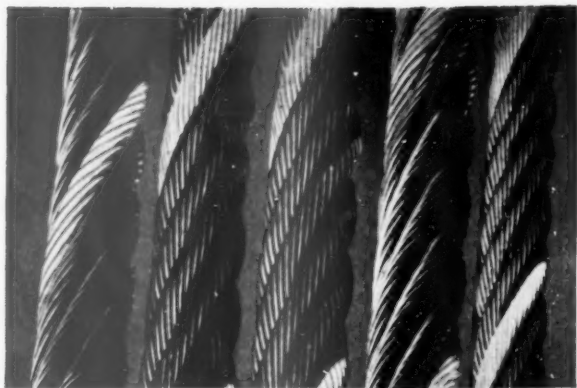
There was also a 27 per cent drop in the actual number of accidents with Worksavers in the last four months over the first eight months of 1952. During the first two-thirds of the year, which included two months when there

were reductions in work hours because of vacations and the steel shortage, the average number of cases was 21.7 per month. In the last four months, with the company in full operation, the average was 16 per month.

Caterpillar has published story-strip booklets for operators of its products, but *Materials On-the-Move with Worksavers* was the first operation handbook the company has distributed exclusively among its own employees.

The occasion for the program on Work-saver safety came about when the accident frequency started to take an upward swing early in 1952. Several methods of instruction had been used for these machines. The foremen instructed their own personnel on the operation, but a survey revealed that the majority of injuries occurred during the first four weeks of the new operator's experience; each foreman had a different method of instruction; few operators were

—To page 76

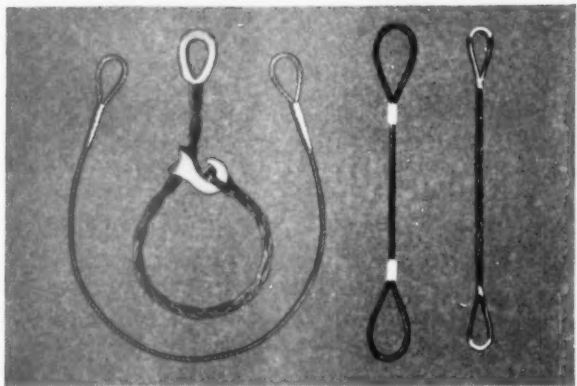


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for lifting and moving materials,
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Macwhyte Safe-Lock wire rope assemblies are made to order in length, strength, and flexibility desired. Terminals are permanently attached to one or both ends. There are many standard types. *Send for Catalog 5201.*

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Quick Refills for Fire Extinguishers



"Pickup and deliver" extinguisher service, with the door wide open to fire until the extinguisher is returned, has caused more than one safety engineer considerable grief.

To get fire extinguishers back into service fast, a safety-conscious Philadelphian, Alan H. Newmayer,

services them at the customer's door, in his "shop on wheels."

This rolling fire extinguisher maintenance shop, set up in a one-ton truck, answers the calls for quick refills of extinguishers. In a few minutes one serviceman and this mobile unit has the refilled extinguisher back in place ready for action.

This specialty servicing of carbon dioxide extinguishers has extended to other types of fire extinguishers, such as chlorobromomethane, carbon tetrachloride, dry chemical, soda-acid, foam, and others.

Everything from "first aid" repair of extinguishers to complete overhaul is done in this mobile unit. Parts as well as tools for the job are carried.

Any old-fashioned scissor grinder will tell you that "service at your door," is not a new customer-service angle, but it took Newmayer some time to stumble on this idea. Founder, and president since 1932, of the Fidelity Fire Protection Company, Philadelphia, he had been in the business of keeping fire extinguishers fit for twenty years. He had long been bothered by time lapse, red tape and delay.

It wasn't easy establishing the service. Obtaining a suitable truck was a problem. It had to be a lightweight truck suitable for city traffic, yet spacious enough to house special refilling, recharging, and repair equipment. It had to provide enough headroom so that the servicemen could move at their work other than on hands and knees. The answer was a one-ton truck fitted with a specially designed lightweight, all-aluminum chassis. There was the problem of the servicing equipment and setting it up in an efficient layout.

Newmayer is secretive about the final accomplishment, and pictures of the truck's interior are forbidden. An idea of his "shop on wheels" may be had from a partial list of facilities: Four 50 pound cylinders of carbon dioxide, an electrically driven transfer pump, containers of vaporizing liquids, a special scale for weighing and checking extinguishers, so designed that it will remain in balance when the truck is parked on an incline, a complete work bench, a wide assortment of tools, a built-in heater for room warmth during the winter months, an electric fan and two roof ventilators for comfort during the summer months. There are shelves and bins for repair parts and each shelf and bin is carefully marked to show items at a glance.

This mobile unit has increased

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Beat the hot weather—order Morton Salt Tablets now. If your local safety equipment distributor cannot supply you, write us for the name of the Morton distributor nearest your office or plant.

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the servicing of fire extinguishers by the company to over 10,000 units a year. With a staff of ten this single unit now operates out of Fidelity's Philadelphia warehouse which is a center for safety equipment of all sorts, but Newmayer pictures a fleet of such units and the possibility of radio communication with his fleet for even faster service.

Captain Video Named Special Deputy of NSC

Captain Video, the futuristic atomic-age character of the DuMont (WGN-TV) television network, was made a special deputy of the National Safety Council on Saturday, March 14, at the formal opening of the 45th Annual Chicago Automobile Show at the International Amphitheatre. Earl F. Campbell, supervisor of field



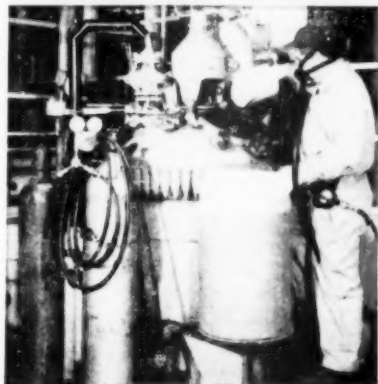
operations for the National Safety Council, made the presentation to Al Hodge, the New York television actor who plays the role.

The ceremony was recorded on newsreel and shown on Spencer Allen's WGN-TV news telecast "Chicagoland Newsreel" on Monday, March 16.

Hodge received the deputation certificate in recognition of his child accident prevention activities, through his television role, during 1953.

Appearing with Hodge during the presentation was Don Hastings, who plays the part of the Video Ranger on the show. The two actors came to Chicago to receive the award, and to appear on the WGN-TV television preview of the auto show.

Scott Respirators put breathing safety where danger used to be at HOFFMAN-LA ROCHE



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THE ACCIDENT BAROMETER

Prepared by the Statistical Division, National Safety Council

All Accidental Deaths

THE TREND of accidental deaths in January was downward compared to 1952. The fatality toll was approximately 7,100, or 1 per cent below the total of 7,200 for January a year ago. Decreases in deaths from home and occupational accidents were nearly offset by an increase in motor-vehicle fatalities. Deaths from public non-motor-vehicle accidents numbered about the same as last year.

Motor-Vehicle Deaths

The motor-vehicle death total was approximately 2,340, or 7 per cent above the January, 1952 total of 2,650. Compared to 1951, it was an increase of 1 per cent.

The January death rate per 100,000,000 vehicle miles was 6.7, a reduction of 1 per cent from the 1952 comparable rate of 6.8.

Of the 46 states reporting for January, 15 had fewer deaths than last year, 4 had the same number and 27 had more deaths. Reporting cities, with populations over 10,000, showed an increase of 14 per cent over January, 1952. Of

the 453 cities reporting, 97 showed increases, 274 had no change and 82 had decreases.

Regional changes from 1952 in the January death totals were:

North Atlantic	+17%
South Atlantic	-2%
North Central	+12%
South Central	-6%
Mountain	+14%
Pacific	+18%

Occupational Accidents

There were about 1,100 deaths from occupational accidents in January, or 100 fewer than occurred in January a year ago.

The average frequency rate (disabling injuries per million man-hours) in seventeen sectional accident prevention contests conducted by the National Safety Council was 6.13, a 7 per cent reduction from January, 1952. The frequency rate for plants in community safety council contests was 5.99, a decrease of 14 per cent from last year. In these contests the severity rate (days lost per thousand man-hours) was 0.32, a reduction of 46 per cent from January, 1952.

Public Deaths

The January death total for public non-motor-vehicle accidents was 300, about the same number as occurred in 1952. Increases in deaths from burns and drownings were offset by decreases in deaths from transportation and firearms accidents. Fatal falls numbered about the same as last year. Deaths of children under 5 years old and persons 45 to 64 years of age were more numerous than in 1952 while deaths of children 5 to 14 years old and persons in the age groups from 15 to 44 years of age showed decreases. Among persons 65 years and over, accidental deaths numbered about the same as last year.

Home Deaths

The home accident death toll for January was 2,500, or 7 per cent below January, last year. There were large decreases in deaths from burns, mechanical suffocation and unclassified home accidents, and small reductions in fatal firearms accidents and falls. A moderate increase occurred in deaths from poisonings. All age groups showed some decrease with the largest change recorded for young people 15 to 24 years old and the smallest for persons 65 years and over.

MIT Announces Session On Industrial Health

Management Responsibility for Occupational Health will be the subject of a one-week Special Summer Program during the 1953 Summer Session at the Massachusetts Institute of Technology from June 22 to June 26.

The program will be jointly supervised by Dr. Dana L. Farnsworth, director of the M.I.T. Medical Department, and Dr. Harriet L. Hardy, head of the M.I.T. Occupational Medical Service. They will be assisted by lecturers from the M.I.T. staff and by others qualified in this field from throughout the United States.

Following are among the topics which will be presented: industrial medical organizations and the supporting administrative relationships; effects of toxic chemicals, harmful dusts, and excess ionizing radiations, with methods of control; procedures for handling fire and explosion risks; and personality factors involved in the relationships within industrial organizations.

Each member of the course will be given an opportunity for special study on the potential health hazards of his particular industry. Such problems as the privacy of medical knowledge, medico-legal responsibility, management's interest in proper placement of very

young and aging workers, and rehabilitating younger injured workers will be discussed. And an attempt will be made to collect and organize those facts of human relationships which have been developed in psychiatry and psychology in such a way as to make them useful to executives in the improvement of their own organizations.

Registration will be limited to 60 persons; this group will be sub-divided into four sections to make possible more detailed study of individual and specific problems.

Further information may be obtained from the Director of the Summer Session, Room 3-107, Massachusetts Institute of Technology, Cambridge 39.

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Hot Load Carried Safely



With ingot in position, insulated cover is lowered over it and locked to base. Entire load is then securely fastened to the bed of the semi-trailer, and hot metal shipped 30 miles or more with the loss of only a fraction of its heat. Made of reinforced asbestos sandwiched in low gauge sheet metal.

SHIPMENT of hot ingots and billets, in specially designed insulated containers, makes the New Brighton, Pa., plant of Heppenstall Company practically "next door" to the main plant in Pittsburgh, about 30 miles away.

Ingots, carried to the New Brighton plant, and billets, hauled from New Brighton to Pittsburgh, are received with the loss of only a fraction of their heat. Reheated to the proper temperatures, they are soon ready for subsequent forging operations, speeding production, avoiding waste of heat.

The New Brighton plant was acquired by Heppenstall in December 1950, to supplement the production of its plants in Pittsburgh and at Bridgeport, Conn. It provided extra press capacity for manufacturing die blocks and other specialties, but lacked melting facilities.

Heppenstall was able to furnish some of the ingots required from the open hearth furnaces and electric induction furnaces at its Pittsburgh plant and was able to have others made to specifications by steel suppliers in the area. Ordinarily, however, with a distance of 30 to 40 miles involved, it would be necessary to cool the ingots before shipping them to New Brighton and to reheat them on arrival there. Likewise, when billets

were shipped from New Brighton to Pittsburgh, it would be necessary to cool and then reheat them. Rigid control of temperature is essential in handling alloy steels.

Cooling a hot ingot takes as much as ten days. Then, before it can be worked, it must be preheated prior to charging into the hot forge furnaces. Then, allowing it to cool between one forging operation and the next would have been time-consuming and expensive.

To overcome this problem, Heppenstall engineers devised a special insulated box in which the hot metal can be transported from one plant to the other, in safety, with most of its heat locked in. The boxes were fabricated by Limbach Company.

Each box, made of reinforced asbestos sandwiched in low gauge sheet metal, consists of a base and a cover which locks into it. Hooks, welded to both the base and the cover, make it possible to lift the load with ease by either a sling chain or a prearranged cable sling. Placed on the bed of a semi-trailer, and securely fastened, the load is soon on its way.

Ingots, stripped from the ingot molds at approximately 1300° or 1400° F., are loaded into the insulated boxes. On arrival at New Brighton, a hot ingot can be un-

loaded to an awaiting car-type furnace bottom in five minutes or less, having lost only about 200° F. of its heat. Subsequent forging operations can be performed within eight hours.

The same system is used in hauling hot billets from New Brighton to Pittsburgh. The insulated boxes, which weigh approximately 5,000 pounds, were designed for handling ingots up to 23,000 pounds and loads of billets up to 25,000 pounds.

Wrabetz Honored at Cannery Safety Institute

VOYTA C. WRABETZ, chairman of the state industrial commission, was honored by the Wisconsin Cannery Association for his "inspiring leadership in the Wisconsin safety movement," at the cannery's eighth annual safety institute held at Madison.

Mr. Wrabetz was presented with a bronze plaque by Ray Krier, president of the association, at the luncheon meeting of the one-day safety institute.

A continued decline in the number of injury cases in canning companies in 1952 was reported by Mr. Wrabetz, in discussing the industry's safety record.

In welcoming the industry executives from all parts of the state, Mr. Krier pointed out that the cannery are marking the eighth year of their organized safety program which they pioneered among all industries in Wisconsin.

The recently-formed Migrant Relations Committee of the state cannery association reported that a preliminary survey of companies brought "an excellent response," and a report of the study soon will be completed.

Citation of the bronze plaque given to Mr. Wrabetz read:

"In recognition of his inspiring leadership in the Wisconsin safety movement, this plaque is presented to Voyta C. Wrabetz, Chairman of the Wisconsin Industrial Commission since 1927, by his friends in the Wisconsin canning industry. An able administrator and faithful public servant, he has dedicated himself to the prevention of accidents to workmen because he puts human values first."

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THE SAFETY LIBRARY



Books, Pamphlets and Periodicals of Interest
to Safety Men

BOOKS AND PAMPHLETS

Dust

The Spontaneous Ignition and Dust Explosion Hazards of Certain Soybean Products. Published by Underwriters' Laboratories, 207 East Ohio St., Chicago 11, 1953, 26 p. Free.

Health

Back Injuries in Brickmaking. By F. S. Crawford and others. Published by U. S. Bureau of Mines, 1953, 14 p. Available from The Bureau, Publications Distribution Section, 4800 Forbes St., Pittsburgh 13, Pa. Free.

Lightning

Code for Protection Against Lightning. Revised. Published by National Bureau of Standards, 1952, 88 p. For sale by The Superintendent of Documents, Washington 25, D. C. 40c (Handbook 46—Supersedes H40).

Noise

Octave-Band Filter Set for the Analysis of Noise and Other Sounds. Published by American Standards Association, 70 East 45th St., New York 17, 1952, 11 p. 50c (Z24.10).

MAGAZINE ARTICLES

Air Pollution

The Greater Detroit-Windsor Air Pollution Study. Part I—Industry's Part — By J. C. Radcliffe. *Part II—Investigation of Environmental Contaminants by Continuous Observations and Area Sampling.* American Industrial Hygiene Association. Quarterly, Dec. 1952, p. 206.

Chemicals

Toxicology and Safe Handling of CBP-55 (Technical 1-Chloro-3-Bromopropene-1). By C. H. Hine and others. AMA. Industrial Hy-

giene and Occupational Medicine, Feb. 1953, p. 118.

Commercial Vehicles

The Case for the Use of Right Hand Rear View Mirrors. By Elmer R. Schuemann. Mass Transportation, March 1953, p. 67.

Construction

Safety of Men Working in Traffic. Better Roads. March 1953.

Electrical Industry

Safety Is Our Business. By Ernest L. Godshalk. Edison Electric Institute Bulletin. March 1953.

Fire Protection

Plant-Designed Fireproof System Burns Sawdust Safely. Plant Engineering, March 1953, p. 96.

Handling Materials

Automatic Safety Stopper Kups Steel Bars in Place. Plant Engineering, March 1953, p. 85.

Health

Antimony Poisoning in Industry. By Lucian E. Renes. AMA Industrial Hygiene and Occupational Medicine, Feb. 1953, p. 99.

Allergy and Occupational Diseases. By E. Sidi and others. Industrial Medicine and Surgery, March 1953, p. 93.

Occupational Leukoderma with Report of Cases. By Joseph V. Klanders and John M. Kimmich. Industrial Medicine and Surgery, March 1953, p. 106.

Hospitals

A New Simplified Accident Record Form. By Kent Francis. Hospitals, March 1953, p. 90.

Logging Industry

Brown Company's Safety Program. By J. Omer Lang. Northeastern Logger, March 1953, p. 7.

Mines

Improving Haulage Safety. Coal

Age, March 1953, p. 110.

Noise

Doing Something to Check Plant Noise. Modern Industry, March 15, 1953, p. 95.

Sound Conditioning a Printing Plant. By Francis A. Westbrook. Printing Equipment Engineer, March 1953, p. 33.

Power Press

Power Press Protection—Radio Active Guard. By James H. Heacock. California Safety News, March 1953, p. 10.

Printing Industry

Safety in the Composing Room. By Lillian Stemp. The Inland Printer, March 1953, p. 34.

Safety Shoes Make the Difference. By Lillian Stemp. Bookbinding and Book Production, March 1953, p. 47.

Rope

What You Should Know About Rope. By John Durgin. Construction Methods and Equipment, March 1953, p. 133.

Textile Industry

Safety. By Thomas B. Winston. Textile World, p. 89.

Training

Fork Truck Operators Help Train Themselves. By A. G. Erdman and S. A. Marino. Factory Management and Maintenance, March 1953, p. 138.

Job Training for Safety. By James F. Collins. Pit and Quarry, March 1953, p. 128.

Waste Disposal

Burning Radio Active Wastes in Institutional Incinerators. By Alfred Machis and John C. Geyer. American Industrial Hygiene Association. Quarterly, Dec. 1952.

Welding

Gases Produced by Inert Gas Welding. By John J. Ferry and Gordon B. Ginther. American Industrial Hygiene Association. Quarterly, Dec. 1952, p. 196.

Use of Thoriated Tungsten Electrodes in Inert Gas Shielded Arc Welding. By A. J. Breslin and W. B. Harris. American Industrial Hygiene Association. Quarterly, Dec. 1952, p. 191.



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Abstracts of current literature
on Industrial Hygiene, Medicine, and Nursing

BY F. A. VAN ATTA
Industrial Department, NSC

Pre-placement Examinations

A Pre-Placement Examination Program for Workers Assigned to Heavy Jobs by William F. Becker. *Industrial Medicine and Surgery* 22:8-10 (January, 1953).

THE NUMBER of industrial back injuries has increased very rapidly as compared to the increase in the number of industrial employees. For instance: the State of Ohio reported a 31 per cent increase in employment from 1940 to 1950 and a 132 per cent increase in back injuries. New York's labor force increased 7 per cent in the same period and the number of back injuries increased 43 per cent.

At the Hawthorne Plant of the Western Electric Company the record of back injuries showed a steady increase following World War II. In spite of improved methods of material handling and other devices which should have had some effect, neither the frequency nor the severity of back injuries decreased.

In view of this situation, a definite program for the reduction of back injuries was introduced in May of 1950. Its major feature was a pre-placement examination required for all individuals prior to being placed on heavy work. Jobs of heavy work are defined as work requiring continuous lifting of material weighing over 25 pounds or the equivalent exertion by pulling or pushing and work which involves continuous strain.

The examination includes a history with particular attention to previous illnesses, operations and injuries, especially back ailments.

A general physical examination with particular attention to anatomical defects and deformities such as wry neck, deformity of the chest, asymmetry of the extremities and conditions of the arches. Movements of the back, arms and legs are also checked to see that they are free. The heart and circulatory system is checked carefully and there is an examination for hernia. X-rays are taken of the lower back, both from the side and from the front and sometimes obliquely.

In the evaluation of the findings of the examination, age and previous occupation are important factors. It is necessary to evaluate each individual's situation separately since the program is aimed at the prevention of back injuries and not at the elimination of every employee whose physical condition is such that he might become a compensation liability. Consequently, the criteria for exclusion cannot be set up rigidly. The things which definitely exclude from heavy work are circulatory and genito-urinary disorders which call for restricted work, subnormal muscular or skeletal development, limited back motion, advanced varicosities, extreme short-sightedness and certain spinal disorders.

During the two and a half years the program has been in operation, 1,062 men have been examined and 802 have been accepted for heavy work. In the two and a half years there have been 14 back injuries among these 802 men which have involved 13 temporary partial disabilities and 1 disabling injury with a loss of 13 days. This is to be compared with

the average loss of 57 days for back injuries reported by the Illinois State Department of Labor.

Another comparison is that of 700 individuals working at jobs on which back injuries occurred during 1950 and '51: 561 employees who had not been through the examination program showed 245 back injuries or 43.8% and 139 who had been through the examination program showed 5 back injuries or 3.6%.

For the over-all plant the frequency rate for back injuries has been reduced from 3.48 to 2.49 between 1948 and 1952 and the severity rate has been reduced from 122.3 to 49.7.

Cancer in Tar Workers

Occupational Skin Cancer in a Group of Tar Workers, by R. E. W. Fisher. *The American Medical Association Archives of Industrial Hygiene and Occupational Medicine* 7:12-18 (January, 1953).

THIS PAPER reports the survey of 241 men employed in a tar distillery in London. These 241 men were all of the employees of this plant with the exception of two men who had been exposed to other carcinogenic materials before starting work at the tar distillery so that they were excluded from the examination of the other men for skin changes attributable to the tar. The changes looked for were blackheads, inflammation of the hair follicles, chronic redness of the skin, brown pigmentation of the skin, changes in the skin texture, plane warts, areas of excessive growth of the outer skin surface, freckles which

—To page 145

**GIVE EXTRA EAR COMFORT TO WORKERS!
SOLVE YOUR INVENTORY PROBLEMS!**

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Now Watchemoket's popular Retrax* temples are available in sturdy plastic that's feather-light! These all-plastic temples are the first to successfully rival the flexibility and ear comfort of metal cable-action temples. Plastic "ball-chain" hook design fits comfortably into the cartilage contour behind worker's ear.

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There's no need to stock extra frames of various temple lengths — not when versatile Retrax* temples are available! Can be telescoped in or out for perfect fit by workers themselves! Once adjusted, temples hold firmly in place:

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Now Available On These Popular Eye-Savers Models:

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Model 415 has exclusive snap-out; snap-in lens feature. New hinges are designed to provide easy lens angle adjustment for perfect fit. Perfect balance means perfect wearing comfort.



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National Safety Council Awards for Outstanding Records

THREE types of awards for outstanding performance in industrial accident prevention are provided for in the "Plan for Recognizing Good Industrial Safety Records" adopted in January, 1952, by the Industrial Conference and the Board of Directors of the National Safety Council.

The three types of awards are:

1. **THE AWARD OF HONOR**, the highest award, replaces the Distinguished Service to Safety Award. It goes to industrial establishments whose experience meets rigorous statistical standards, even though it may not be injury-free. It also goes to those which complete 3,000,000 manhours without a disabling injury.

2. **THE AWARD OF MERIT** has similar but less exacting requirements. The standards for non-perfect records are somewhat lower, and the minimum number of injury-free manhours needed to qualify is 1,000,000.

3. **THE CERTIFICATE OF COMMENDATION** is given only for no-injury records covering a period of one or more entire calendar years and involving exposure of 200,000 to 1,000,000 manhours.

For qualifying calendar-year experience, all three types of awards are made automatically on the basis of annual reports submitted to the Council by members. The Award of Honor and the Award of Merit may also be made on special application in two types of cases:

1. Where a qualifying total of injury-free manhours is accumulated in some period rather than a calendar year.

2. Where a current period of two or more years is to be used



Clifford F. Hood, president of U.S. Steel Corp., (left), accepts National Safety Council's 1952 Award of Honor from Ned H. Dearborn, NSC president, on a recent "Theater Guild on the Air" broadcast in New York. U.S. Steel won the highest safety honor for the second year in a row. (U.S. Steel photo)

in evaluating injury rate improvement.

Publication of awards under this plan succeeds "The Honor Roll" department formerly published in the **NATIONAL SAFETY NEWS**. The foregoing is but a synopsis of the award plan. For a more complete and precise statement of eligibility requirements, members should refer to the plan itself. Details may be obtained by writing to Statistics Division, National Safety Council.

Awards of Honor

American Cyanamid Co., Calco Chemical Division.

Blatz Brewing Co., Milwaukee, Wis. (Entire company).

Bliss & Laughlin, Inc., Harvey, Ill. (Entire company).

Carolina Aluminum Co., Badin, N.C.

Consolidated Vultee Aircraft Corp., Ft. Worth, Texas, Division.

Department of the Army, Corps of Engineers, Printing and Publishing Unit.

Edgar Brothers Co., McIntyre, Ga. (Entire company).

Fischer Lime & Cement Co., Memphis, Texas (Entire company).

The Flintkote Co., Chicago Heights Plant.

Forstmann Wollen Co., Worsted Mill, Garfield, N. J.

General Electric Co., Lamp Division, East Boston Lamp Works No. 8.

General Foods Corp., New York, N.Y. (Entire company).

International Harvester Co., Waukesha Works.

Laclede-Christy Co., Laclede Plant, Maxwell House Division, Hoboken, N. J.

Miller Brewing Co., Milwaukee, Wis. (Entire company).

Mohawk Carpet Mills, Inc., Amsterdam, N.Y. (Entire company).

National Carbon Co., Jersey City Warehouse.

National Cash Register Co., Dayton, Ohio. (Entire company).

Nickey Brothers, Inc., Memphis, Tenn. (Entire company).

Price Brothers & Co., Ltd., Riverbend Unit.

Ralston Purina Co., Montreal Unit.

C. Schmidt & Sons, Inc., Philadelphia, Pa. (Entire company).

Teletype Corp., Chicago, Ill. (Entire company).

Tennessee Valley Authority, Shawnee Steam Plant.

U.S. Navy Bureau of Ordnance, Keyport, Wash., U.S. Naval Torpedo Station.

United States Steel Corp., All Steel Producing Units.

Weyerhaeuser Timber Co., Longview Plywood Division.

Awards of Merit

R. C. Allen Business Machines, Inc., Grand Rapids, Mich. (Entire company).

Aluminum Co. of America, Richmond, Ind., Plant.

American Hoist & Derrick Co., St. Paul, Minn. (Entire company).

—To page 133

These Two
Safety
Work Shoes
are identical except-

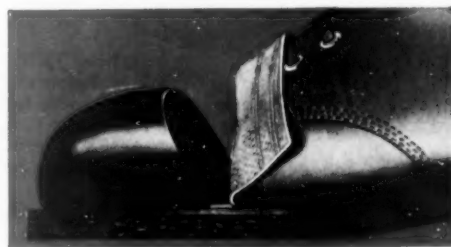


one is 45+% STRONGER

Your workers' toes will have 45+% more protection when you select the shoe on the lower right. This safety shoe contains WINGUARD 500 — the *safest* steel toe — designed to give maximum protection and comfort. WINGUARD safety steel toes were

recently subjected to both compression and impact testing by one of the country's leading metallurgical testing laboratories and conclusively proved to average 45+% stronger and safer than non-WINGUARD steel toes otherwise identical.

WINGUARD 500 — for the rough and tumble work shoes that have to fight back against heavy odds. Its wings — secret of its greater strength — brace the steel toe against rearward tilting under impact. Its added supporting surfaces resist outward spreading under critical pressure.



**WINGUARDS SAFEST
STEEL BOX TOES**

SAFETY BOX TOE COMPANY • 812 STATLER BUILDING • BOSTON 16, MASSACHUSETTS

... THEY ALL SAY
DRYBROW
 USERS TURN OUT
 MORE WORK...
 ... SAFER TOO
 and MIGHTY
 COMFORTABLE!



LASTS LONGER — May be used again and again —

BECAUSE, it's not made from cheap cotton, but Dupont's cellulose sponge with countless tiny pores to cool by evaporation.

Cheapest in the Long Run!

WORKERS praise its comfort features. Sweat doesn't fog glasses or goggles... doesn't get into eyes and smart!

PLANT MANAGERS are delighted when production goes up as much as 10% in hottest summer weather.

SAFETY ENGINEERS talk about evaporation cooling the whole body because the pores of sponge cellulose act like a wick. Drybrow holds 20 times its weight of water! No wonder it's the Nation's Sweat Band! — praised by every user.

FREE!

**TRY A
 DRYBROW
 AT OUR
 EXPENSE**



**STOP
 THESE
 ANNOYING
 DROPS OF
 SWEAT!**

Wearing a Drybrow is the next best thing to a cool shower. Evaporation of perspiration through thousands of cellulose sponge pores cools as nothing else can. Try one and be convinced. Sample sent FREE; or order 1 to 39 boxes at \$4 each or \$3.60 a box for 40 or more. (Each box contains 25 of the famous Drybrow Sweatbands.)

American Allsafe Co., Inc.
 1245 Niagara St. • Buffalo 13, N. Y.

COMING EVENTS



In the Field of Safety

May 6-8, Oklahoma City, Okla.

Annual Oklahoma Safety Conference (Biltmore Hotel). Lloyd F. Palmer, manager, Oklahoma Safety Council, Inc., 1600 N.W. 23rd St., Oklahoma City, Okla.

May 7, Watertown, Wis.

Rock River Valley Safety Conference.

May 7-8, Baltimore, Md.

The Governor's Safety-Health Conference and Exhibit (Lord Baltimore Hotel). Joseph A. Haller, director of safety, State Industrial Accident Commission, Equitable Bldg., Baltimore 2, Md.

May 7-9, Roanoke, Va.

Nineteenth Annual Virginia State-Wide Safety Conference (Hotel Roanoke). William M. Myers, managing director, Richmond Safety Council, 49 Allison Bldg., Richmond 19, Va.

May 11-13, Syracuse, N. Y.

Central New York Safety Conference and Exposition. Walter L. Fox, manager, Safety Division, Chamber of Commerce, Syracuse, N. Y.

May 13, Allentown, Pa.

Twenty-sixth Annual Eastern Pennsylvania Safety Conference. Harry C. Woods, manager, Lehigh Valley Safety Council, 602 East Third St., Bethlehem, Pa.

May 13-15, Winston-Salem, N. C.

Twenty-third Annual North Carolina Statewide Industrial Safety Conference, (Robert E. Lee Hotel). H. S. Baucom, safety director, North Carolina Industrial Commission, Raleigh, N. C.

May 14, Green Bay, Wis.

Fox River Valley and Lake Shore Safety Conference.

May 26, Waukesha, Wis.

South East and Lake Shore Safety Conference.

May 18-22, Chicago

National Fire Protection Assn., 57th Annual Meeting (Palmer House). Percy Bugbee, general manager, 60 Battery March St., Boston 10, Mass.

May 21-22, Duluth, Minn.

29th Annual Conference, Lake Superior Mines Safety Council (Hotel Duluth). John A. Johnson, chief, Accident Prevention and Health Div., Region V, U. S. Bureau of Mines, 18 Federal Bldg., Duluth 2, Minn.

June 2-4, Chicago

Greater Chicago Safety Conference and Exposition (Conrad Hilton Hotel). Joseph F. Stech, manager, Greater Chicago Safety Council, Suite 806, 10 North Clark St., Chicago 2.

June 2, Rhinelander, Wis.

Wisconsin River Valley Safety Conference.

June 4-6, Portland, Ore.

Nineteenth Annual Forest Products Safety Conference (Multnomah Hotel). Pat Reiten, secretary, Simpson Logging Co., Shelton, Wash.

June 11, Superior, Wis.

Upper Mississippi Valley and Lake Superior Safety Conference.

Sept. 16-17, Harrisburg, Pa.

Pennsylvania Industrial Safety Conference (Hotel Penn Harris). Frank K. Bohl, deputy secretary, Department of Labor and Industry, Room 304 South Office Bldg., Harrisburg, Pa.

Sept. 17-18, York Harbor, Me.

Twenty-sixth Annual Maine State Safety Conference (Marshall House). A. F. Minchin, secretary, Industrial Safety Division, Department of Labor and Industry, Augusta, Me.

Oct. 19-23, Chicago

Forty-first National Safety Congress and Exposition (Conrad Hilton Hotel). R. L. Forney, general secretary, National Safety Council, 425 N. Michigan Ave., Chicago 11.

Nov. 17-18, Cincinnati, O.

Third Annual Greater Cincinnati Safety Conference (Sheraton-Gibson Hotel). Kenneth R. Miller, executive director, Greater Cincinnati Safety Council, 1203 Federal Reserve Bank Building, Cincinnati 2, Ohio.


Dec. 7-8, New Orleans, La.

Louisiana Safety Conference (Roosevelt Hotel). Charles E. Doerler, conference secretary. Address, c/o Caddo Bossier Safety Council, Inc., 610 Edwards St., Box 806, Shreveport, La.

March 10-11, Philadelphia, Pa.

Twentieth Annual Philadelphia Regional Safety and Fire Conference and Exhibit (Bellevue-Stratford Hotel). Walter W. Matthews, managing director, Philadelphia Chamber of Commerce Safety Council, Architects Building, 17th and Sansom Streets, Philadelphia 3, Pa.

Tact is giving a person a shot in the arm without letting him feel the needle.



Give fire half a
chance and it will
over-run you like a
swarm of ants.

You must stamp it out
anywhere it shows itself.
In the paint locker,
power plant, garage.

That calls for a battery
of strategically placed
KIDDE Portable Fire
Extinguishers.

Get the ants out of your plants.
Call your KIDDE dealer today.

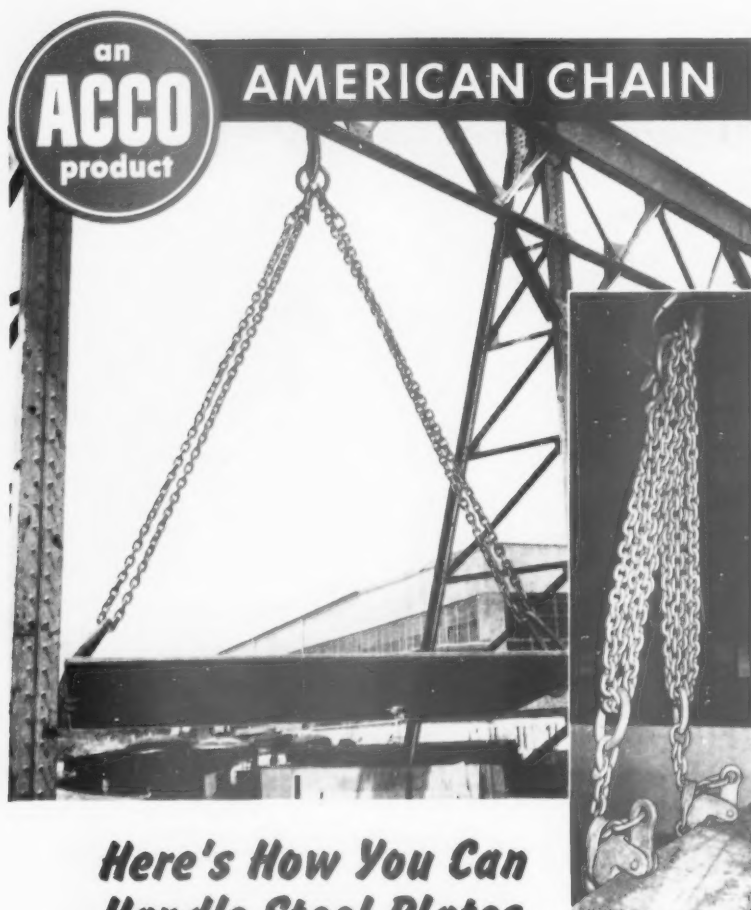
Kidde

Walter Kidde & Company, Inc.,

545 Main Street, Belleville 9, N. J.

Walter Kidde & Company of Canada, Ltd., Montreal, P. Q.

National Safety News, May, 1953



Here's How You Can Handle Steel Plates

• These pictures show only two applications of an AMERICAN 125 Endweldur alloy ACCO Registered Sling Chain with ACCO series 80 Sling Hooks. The 2 legs are long enough for use with various length plates. They can also be used in a double-basket hitch for lifting two or more plates together.

The big advantage in using this AMERICAN Chain is in the small diameter, light weight, and great strength of the tough alloy chain, and in the short links which make the chain so flexible and easy to rig. See it in the right hand picture above.

Inside the plant this same sling chain is used in a wide variety of lifts on castings, housings, and finished machines. It has become sort of a "jack-of-all-trades."

AMERICAN makes sling chains for every use with ACCO grab, sling, foundry, and special hooks. Note (above) the two ACCO Registered Sling Chains on the plate grabs. The ACCO Sling Chain Catalog gives you full information on America's finest chain slings—AMERICAN.

Write to our York, Pa., office today for Catalog DH-314

ACCO



**AMERICAN CHAIN DIVISION
AMERICAN CHAIN & CABLE**

York, Pa., Atlanta, Chicago, Denver, Detroit, Los Angeles,
New York, Philadelphia, Pittsburgh, Portland,
San Francisco, Bridgeport, Conn.

**American
Chain**

Announce Winners of Films for Safety Awards

TEN MOTION PICTURES and one sound slidefilm have been chosen by the National Committee on Films for Safety as the outstanding accident prevention films produced in 1952.

The David S. Beyer Memorial Award, presented annually by the Liberty Mutual Insurance Co. for the best theatrical motion picture on traffic safety, went to Theatre of Life for *Devil Take Us*. The picture was filmed with the cooperation of the National Safety Council and the California Highway Patrol.

The committee, which represents 22 national organizations, makes annual awards for safety films in the fields of traffic, occupational, home and general safety. The basic purpose of the committee is to improve public knowledge of accident prevention measures through visual means.

The complete list of 1952 award winners, each of which receives an individualized bronze plaque, follows:

Theatrical Motion Pictures

Devil Take Us, produced by Theatre of Life, Hollywood, Calif., filmed with the cooperation of the National Safety Council and the California Highway Patrol.

Non-Theatrical Motion Pictures

Hands Off, produced by Visual Aids Production, Iowa State College, for Blue Cross and Blue Shield. (Farm Safety)

Not Too Hot to Handle, produced by Jam Handy Organization for Walter Kidde Co. (Fire Safety)

On Post Safety, produced by U. S. Army Signal Corps for U. S. Army. (Military Post Safety)

The School Safety Committee, produced by Sid Davis for Automobile Club of Southern California. (School Safety)

Safe Every Second, produced by Gene K. Walker Productions for Standard Stations, Inc. (Occupational Safety)

You Can Take It with You, produced by Dallas Jones Productions for National Safety Council. (Occupational Safety)

Dark Daze, produced by Vogue-Wright Studios for National Association of Automotive Mutual Insurance Companies. (Traffic Safety)

Mickey's Big Chance, produced by F. K. Rockett Co. for American Automobile Association Foundation for Traffic Safety. (Traffic Safety)

Word of Honor, produced by Vogue-

Wright Studios for Kaiser-Frazer Sales Corp. (Traffic Safety)

Sound Slidefilms

Pick Your Safety Target, produced by Sarra, Inc., for National Safety Council. (Occupational Safety)

John B. McCullough, director of technical services, Motion Picture Association of America, is chairman of the committee, which is made up of a cross-section of institutions active in all fields of safety work.

Microscope Tells Toxicity of Dust

A SIMPLE METHOD for determining quickly the toxicity of various beryllium oxide dusts that have caused acute pneumonitis when inhaled was demonstrated to industrial hygienists and physicians attending the recent 1953 Health Conference in Los Angeles.

After several months of research, Germain C. Crossmon, head of biological and chemical microscopy at Bausch & Lomb Optical Co., Rochester, N. Y., has developed a technique for identifying dusts, some of which have caused acute attacks of chemical pneumonia or death among workers in certain industries, particularly the fluorescent lamp industry.

Crossmon, who continued the initial research conducted in 1949-50 by Dr. R. H. Hall and associates at the Atomic Energy Project of the University of Rochester into the toxicity of beryllium oxides produced by different manufacturers, uses what he calls a "dispersing staining" technique employing polarizing and dark-field microscopes. The most dangerous beryllium oxides appear as dark particles with the polarizing microscope, and as a mixture of light blue and white particles in a dark-field.

The less toxic manufactured grades appear as bright particles with the polarizing microscope, and bluish-red with the dark-field.

Although the use of the microscope serves as an accurate and rapid method of differentiating these various crystal forms of beryllium oxide which differ in their ability to cause acute pneumonitis, long periods of exposure to any of the forms of beryllium oxide can possibly cause the chronic disease (berylliosis).

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featuring
DUALOC*

With these Parts
YOU
can assemble
ACCO Registered
Wire Rope Slings
for **85%** of your
lifting requirements

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DUALOC means dual lock. Two steel collars
securely swaged around the ending double your
security. Don't distort rope. Give full rope
strength. Warranted by ACCO.

• Now you can buy ACCO Registered standard stock parts from which you can make infinite combinations of wire rope slings. If a new lifting job develops, you most likely can handle it with a different hook-up of the same standard ACCO Registered parts you use for regular lifts. But if you should need longer legs, or heavier legs, that's no problem either because everything you need is . . .

Stocked by Distributors

• ACCO Registered Wire Rope Slings and Fittings are stocked by ACCO Sling distributors. That means you can get quick service if you need additional parts or if some part becomes lost or damaged. In case of damage, you don't send a "special" sling back for repairs. (You know how long that takes.) You just order a replacement part from your distributor who delivers promptly.

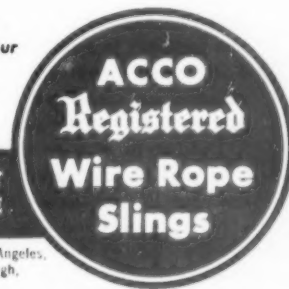
ACCO offers you a complete line of links, safety shackles, anchor shackles, and hooks . . . all Registered and Warranted to have the same strength and dependability as the slings they are to be used with.

Find Out Now what you can do with
ACCO Registered Wire Rope Slings. See your
ACCO Sling distributor or write our
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WIRE ROPE SLING DEPARTMENT
AMERICAN CHAIN & CABLE

Wilkes-Barre, Pa., Chicago, Denver, Houston, Los Angeles,
New York, Odessa, Tex., Philadelphia, Pittsburgh,
San Francisco, Bridgeport, Conn.





Look to this page each month for latest news about NSC services. Address requests for additional information, samples or prices to the Membership Dept.

Data Sheets

During the past few months a number of data sheets have been added to the Council's stock:

Unit First Aid Kits, D-202, provides a useful guide to better first aid for companies with scattered operations. The data sheet contains a simplified accident and first aid report form as well as valuable information on first aid training, inspection and control. To assist companies in the selection of units for their first aid kits, the data sheet includes a chart giving recommendations for some 25 occupations.

Prevention of Falls Down Openings in Mines, D-MIN-11, deals with one of the principal hazards in mines and a source of numerous fatalities and serious injuries each year. The data sheet tells how best to guard various types of openings.

Safety in Scraping Operations in Mines, D-201 outlines the accident problems involved in scraping operations under various conditions. The data sheet tells the safe way of hoisting and lowering equipment, how to avoid the dust hazards resulting from blasting and scraping, and how to bring down hang-ups in a safe manner.

Handbook of Accident Prevention

The Council's new *Handbook of Accident Prevention for Business and Industry* is a convenient safety guide for the manager of a small business or a supervisor of a department in a larger organization.

Similar in size to the popular statistical annual "Accident Facts," the handbook shows the small plant operator and the industrial

foreman how to organize and maintain a safety program. Detailed information is included on subjects such as plant layout, materials handling, housekeeping, machine guarding, electrical hazards, pressure vessel hazards, first aid, fire prevention, and personal protective equipment.

The handbook maintains that accident prevention is but one aspect of running an efficient operation and that this efficiency is not a monopoly of the larger companies. Although, it is true, the small business manager cannot afford to employ full-time safety specialists, he can secure advice and assistance from the many organizations that are ready to help the small operator who is inter-

ested in cutting down accidents. A list of these organizations is included in the final chapter of the handbook.

Operation Safety

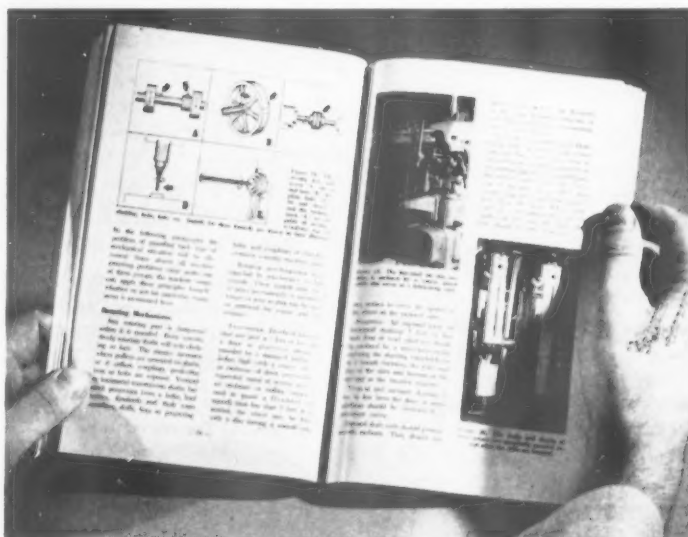
Treating a serious subject in a light manner, Operation Safety's June leaflet brings home the lesson that speed kills.

The leaflet, "And Then There Was One," tells the saga of Jim and Jerry, a pair of twins identical in all respects but one—their attitude towards speed.

The story is told humorously in cartoon and jingle. But there's nothing humorous about the demise of Jerry, the speeding twin, who comes to an untimely end while driving too fast.

This leaflet is a useful tool in off-the-job safety programs. Used as handout with paychecks this leaflet will remind vacation-bound employees of the dangers of excessive speed.

Quantity prices on leaflets, Operation Safety Kits and other Operation Safety materials may be obtained by writing Operation Safety, National Safety Council, 125 N. Michigan Avenue, Chicago, Ill.



The National Safety Council's new 94-page "Handbook of Accident Prevention for Business and Industry" is profusely illustrated and contains several check lists in addition to many photographs, line drawings and charts.



First aid for wounds

Mercurochrome[®]

(H. W. & D. BRAND OF MERBROMIN, DIBROMOXYMERCURIFLUORESCIN SODIUM)

Prevent infection by the prompt
use of 'Mercurochrome.'



Described in New and
Non-official Remedies
(1950) by the Council on
Pharmacy and Chemistry
of the American Medical
Association.

No antiseptic has been proved to be
more effective than 'Mercurochrome.'

Thirty-three years of extensive clinical
and lay use has proved the value of
this popular antiseptic.

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Thantis[®] LOZENGES

First aid for throat irritations

Throat irritations if neglected may result
in serious illnesses.

'Thantis' Lozenges, the original anes-
thetic-antiseptic throat lozenge, are more
effective than any imitation.



HYNSON, WESTCOTT & DUNNING, INC., BALTIMORE 1, MARYLAND

Ground Safety with the Pacific Airlift

(From page 27)

tions for correcting unsafe conditions on two of the landing steps, and he asked that certain fork lift operators be given further indoctrination in safety around planes.

Safety is a vital consideration also for the 1503d Air Traffic Squadron, under the command of Lt. Col. John P. O'Connor. This outfit is in charge of handling and expediting all cargo arriving and departing from Haneda. It is concerned not only about safe delivery of cargo at destination, but its relation to the safety of the plane that hauls it.

For instance, Traffic personnel is charged with responsibility for safety of passengers' luggage, and every day there are dozens of cans of lighter fluid collected from passengers who thoughtlessly packed the highly flammable stuff in their bags. Colonel O'Connor won't even permit flash bulbs in luggage on MATS planes leaving Haneda, for fear they might be set off by energy from radar installations. He said:

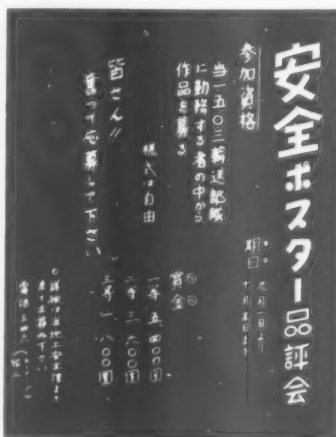
"I must take the position such cargo is dangerous, until it is proved otherwise."

Traffic also has charge of Fleet Service, which provides the clean-up of the planes and prepares the flight lunches, (for which each passenger must pay in advance if he wishes to eat while in flight).

Wings of Merv

MATS really shines in handling its most precious cargo operations—the Air-Evac flights that bring wounded American soldiers back to the U. S. These flights are loaded out by Traffic, under the direction of the 1503d Medical Group, commanded by Major Frederick S. Wolf; Capt. Richard M. Musgrave, Air Evacuation Officer, and Capt. Leroy C. Pierce, flight surgeon.

I visited the latter three at the base infirmary and learned how the job is done. The most rigid safety precautions are followed.



Safety poster contest at Haneda is announced by Japanese bulletin to reach indigenous personnel.

for the safety and comfort of the wounded passengers, and for the safety of the planes that carry them home.

I watched these loading operations at Haneda, again at Hickam Field near Honolulu, and again at Travis Field in California. It seems that provision had been made for every possible contingency.

Taking No Chances

When an Air-Evac flight is coming in for a landing, ambulances and two or more fire trucks are spotted near the point the plane will first touch, and they follow along until the plane taxis up to the ramp. Next to the sea, crash fire ducks and weasels, capable of going into the ocean for a rescue, are waiting. The same procedure is followed in reverse when an Air-Evac flight is out-loaded. The big plane roars along the runway and the ambulances and fire trucks go chasing along after it, like chicks trying to keep up with a frightened mother hen. They stay as close as possible until the plane is airborne.

Only once has this precaution needed to prove its value at Hana. When one Air-Evac plane touched the runway, two small fires

were started by faulty brakes. Almost by the time the plane had come to rest, two fire trucks had it covered with foam.

The boys in Korea consider MATS and its Air-Evac operation one of the best morale boosters to be found. On one occasion, when Ralph Riley, then Ground Safety Director of the Pacific Division of MATS, went to check an accident case in Tokyo General Hospital, one of the Army doctors treating wounded boys from Korea told him:

"Your outfit is the best medicine these boys know about."

While the separate functions of Ground Safety and Flight Safety are pretty clearly defined, there appear to be a number of areas in transport operation in which both are directly concerned. (As a point of information, one officer told me the Ground Safety Program was effective until the propellers start turning, when Flight Safety takes the responsibility.)

Safety in Maintenance

The Maintenance Squadron at Haneda, commanded by Lt. Col. Richard F. Bache, makes full use of the Ground Safety Program in connection with the occupational exposures in its shops, but the job performed by this outfit makes all the difference in the world when the plane is aloft. For that reason, it must keep close check on length of service between overhauls for the powerful engines that must fan the high atmosphere for hours at a time on the long ocean hops.

Regulations and technical orders on the inspection and maintenance of aircraft must be followed rigidly here, whether the job is first echelon maintenance or complete engine build-ups. The former service includes pre-flight and post-flight checkups, engine run-ups, oil leak checks and inspection of tires, radio and hydraulic systems. After an engine has run for a specified number of hours, it is removed for overhaul, to be replaced by one of the completed build-ups.

Lt. Col. John E. Fitzgerald Jr.,
—To page 72

Sure Steps to PROTECTION!



An overheated engine driven generator caused this \$774,000 fire at the Hurd Millwork Corporation, Medford, Wisconsin.



Air-Flo VL EXTINGUISHER

This serious industrial fire, like most others, started small. Quick action with a one gallon Buffalo Air-Flo Vaporizing Liquid Extinguisher can stop a fire like this when it starts. Instant action against dangerous flammable liquid and electrical fires is easy with a Buffalo Air-Flo. Big, dual air pumps instantly produce internal air pressure which forces a continuous, steady stream of flame-killing Vaporizing Liquid up to 30 feet. You are always sure of dependable performance, too, because Buffalo's exclusive built-in Dryex absorbs all traces of internal corrosion-causing moisture.

Buffalo manufactures a complete extinguisher line for positive protection from every fire hazard. Order Buffalo protection now! Consult your Classified Telephone Directory or write today for your nearest Buffalo Distributor.

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BUFFALO FIRE APPLIANCE CORP.

ESTABLISHED IN 1895

DAYTON 1, OHIO

**"Peel
FERA-MAT
.....roll it for
non-slip grip!"**

"Speed, safety and savings go together in our plant, thanks to Fera-Mat. It covers large areas faster than any safety flooring material I've ever used. It peels like adhesive tape, goes down in a hurry and *stays safe* — despite the month-in, month-out pounding of heavy traffic."



**"A trowel
plus
FERROX
equals safety
for me!"**

"Fera-Mat's fine, but I'm sold on Ferrox for three good reasons. One, it trowels easily—perfect around machines and for uneven surfaces. Two, I get excellent coverage. Three, I save money with economical Ferrox and cut labor costs, too. Yes sir, Ferrox makes safety-sense to me."

Don't slip up on safety! Use either FERA-MAT or FERROX, depending on conditions in your plant. No matter what your "slippery floor" problem, you will find the answer in American Abrasive's wide-range line of non-slip treads and plates, including FERALUN, BRONZALUN and ALUMALUN.

**Send today for
AMERICAN
ABRASIVE'S
Fact Folder on
Safety Floorings**

AMERICAN ABRASIVE Safety Floorings

AMERICAN ABRASIVE METALS CO. • IRVINGTON II, N. J.

commanding an Air Transport Squadron, has administrative and training problems that involve the safety of the plane and its load in flight. In his office I first learned of the extent of the flight check list, and of the rigid requirements for the challenge and response between pilot and co-pilot for each item on the list during and after take-off and before and during landings. There is a similar list for emergency procedures.

Foolproof Control

MATS has adopted one of the best devices I have seen for keeping these check items in proper order. The list is printed on a long tape, which is attached to a roller at either end. A light behind the tape and between the rollers illuminates one check item at a time, in proper sequence. This gadget was explained to me by Lt. Roland Lee Morris, a Navy MATS pilot with whom I flew back across the Pacific to Hawaii.

This system makes it almost impossible for the pilots to make mistakes in these major functions by operating the myriad controls in improper sequence.

One of Colonel Fitzgerald's problems is a constant watch on the fitness of his crews, and this involves a continuing series of checks and tests. I was surprised to learn that a crew member could be grounded if he was not proficient in swimming, but it makes good sense. With constant flying over open ocean, all crew members must be trained for survival in case of a forced landing at sea.

On this score, he has the support of Capt. John J. Wortman, Survival Equipment and Training Officer, who has written an extensive treatise on the proper method of facing the hazards of a "ditching." He also schools the airmen in the recognition and use of the various items of survival equipment in his stores. He conducts swimming lessons for the fliers in the Meiji pool in downtown Tokyo and instructs in the proper method of inflating and righting life rafts. His stores crew is busy all the time checking the rafts and other equipment.

One of the most serious prob-
—To page 74

**NOW... a Non-Slip Glove
that's Really Ventilated!**



Model R-45

Hood Glove models R-45 and R-46 have a non-slip finish... yet they are far more flexible than ordinary non-slip gloves.

Ideal for use in any occupation or industry which requires a rough-surfaced glove to assure a firm grip in handling slippery, bulky objects.

Hood makes a complete line of industrial rubber and plastic gloves that will help keep your safety standards high.

Write today for our new illustrated catalog, featuring the Hood Glove Guide, which shows you "how to choose the RIGHT glove for EACH job".

HOOD RUBBER CO., Watertown, Mass.

G-11[®]
(brand of hexachlorophene)

**the first and only
proven, effective and non-irritating
antiseptic chemical for soaps**

Protect your workers and help reduce absenteeism by specifying for your washroom dispensers, soap containing G-11.

Secondary infection is often associated with occupational dermatitis, resulting from cutting oils, solvents, minor cuts, etc.

The antiseptic properties of G-11 soaps and de-

tergents will maintain a low bacteria count on the skin of the hands and forearms, and will help combat this health problem.

Proved by years of safe, successful use, these soaps achieve remarkable reductions in bacteria count of the skin. They are especially essential for food handlers in hospitals, plants, and other institutions.

A brochure and bibliography will be sent on request.

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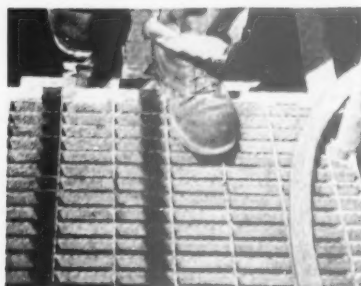
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SAFETY ENGINEERING DEPT.
MEMO

*Gives non-skid
protection in
every direction
at No Extra Cost!*

A.O. Smith
100% Serrated
SAFETY GRATING



When Feet Slip...

they don't choose the direction of slip. A safe floor is one that never loosens its grip on a man's shoes. A safe floor is one that offers non-skid protection in every direction.

An A. O. Smith 100% serrated safety-floor won't sneak out from under a man. It's made with a grip that moves in from every direction. Look at the picture—with serrations on both the bearing bars and the cross bars, safety travels a two way street.

MAKE SURE OF SAFETY

A. O. Smith 100% serrated safety grating completely engineered and fabricated to your individual requirements is available in principal cities.

see our catalog in



or write for copy



see our catalog in



or write for copy

A.O. Smith
CORPORATION

Milwaukee 1, Wisconsin
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Los Angeles 22
International Division, Milwaukee 1

lems of the Ground Safety Officer at Haneda is the operation of motor vehicles, and in solving it Harry has the enthusiastic support of the safety-minded Motor Transportation Officer, Lt. Paul D. Meerscheidt.

Fleet Safety Training

The Motor Pool, which supplies and maintains staff cars, jeeps, trucks and buses for the transportation of base personnel and supplies, is housed in the same building with the Ground Safety Office. Many of the drivers are Japanese, who have a limited command of English, but Paul manages to get along fine with them on basic orders, and he uses both American and Japanese instructors to conduct the safety training classes held weekly in a regulation classroom on one side of the ground floor.

Special classes, using driver testing equipment and other aids, are given at intervals by Sgt. Hugh Muylle, Ground Safety Technician for the Pacific Division at Honolulu. (MATS is using this equipment at all bases around the world.)

As Ground Safety Officer at Haneda, Harry works directly under the Personnel Director. According to the functional chart, the Ground Safety Officer "supervises the Ground Safety Program and the operation of the Ground Safety Office to promote highest degree of safety in consonance with efficiency in all ground activities within the Wing; serves as the secretary and advisor to the Ground Safety Council and the Safety committees; maintains liaison with all activities on the Base, with Headquarters Far East Air Force, Headquarters Far East Command, Provost Marshal and other interested agencies; investigates all major damage and/or fatal or critical injury accidents involving Base personnel; reviews accident reports; acts on correspondence pertaining to Ground Safety; conducts Safety training classes; performs safety inspections and surveys (non-routine); reviews operational plans and changes in procedure; promulgates any directives required to supplement Ground Safety publications from higher headquarters."

He is assisted in the Ground Safety Office by a non-commissioned officer as Ground Safety Technician, and by a clerk-typist. He also has two indigenous assistants, a Ground Safety Technician and a draftsman, who designs and prepares posters, bulletins and the like for Japanese personnel.

In his capacity of liaison with other commands in Japan, Harry took me to see Maj. Edward Profit, Safety Director for the Far East Air Force, and his assistant, Robert Walterscheid; Safety Director William Wheary of the Far East Command, and his assistant, Elmo Chappelle; Tom Allen, Safety Director for the Japan Logistical Command in Yokohama, and Capt. Albert C. Gordon, then Director of Safety for the 315th Air Division, Combat Cargo.

Back in Tokyo, I finished my interviews and headed back across the Pacific.

(Operation of the Pacific Division Ground Safety Headquarters at Hickam, and at Travis Field, will be told in the concluding article in this series next month.)

Heads British MSA Subsidiary

Appointment of Richard Crawford as managing director of the British subsidiary of Mine Safety Appliances Company, Pittsburgh, has just been announced.

A native of London, Mr. Crawford previously had been general sales manager of Mine Safety Appliances Company, Ltd., Glasgow, Scotland. Well known throughout international mining circles, Mr. Crawford formerly was chief electrical engineer for the National Coal Board in Britain. He joined MSA in 1951.

Mr. Crawford returned recently to Scotland after a month's visit to the company headquarters in Pittsburgh where he studied the latest developments in safety equipment for mines and industries.

"My wife came from a large family. Did yours?"

"No. She brought it with her."



As a further assurance of Test-Proved safety and quality, PAX-LANO-SAV Heavy Duty Granulated Skin Cleanser has been awarded the Seal of Acceptance of the Committee on Cosmetics of the American Medical Association.

Over 25 Years

OF RESEARCH

AND RECOGNITION

PAX-LANO-SAV Heavy Duty is used in more plants than any other skin cleanser because over twenty-five years of continuous research and development have established it as the unchallenged leader among granulated skin cleansers for industrial plant workers. Workers prefer it because it gives them fast, thorough washups yet is kind to their hands the year round—winter as well as summer. Management specifies it because it not only assures worker satisfaction and helps protect against costly outbreaks of Industrial Dermatitis, but it actually costs LESS to use.



THE HOME of PAX-LANO-SAV HEAVY DUTY

In this modern PAX plant, car load after car load of the nation's top skin cleansers are produced every day. Each formulated of the finest ingredients, carefully processed and laboratory controlled at every step to assure adherence to exacting PAX standards.



Look for the PAX ROOSTER—your assurance of Superior products.

PAX PAYS BECAUSE IT COSTS LESS TO USE IN MANY WAYS!

Initial cost per pound is not the yardstick by which to measure skin cleanser economy. PAX-LANO-SAV Heavy Duty Granulated Skin Cleanser costs less because it goes farther and does more with less. One of the country's largest nation-wide corporations* has found that one dispenser full of PAX-LANO-SAV Heavy Duty gives an average of 97 washups as against an average of little over 50 for ordinary skin cleansers. A six months trial of PAX will convince you, just as it has thousands of others, that PAX-LANO-SAV Heavy Duty not only does a better job—it actually costs less to use over a period of time. Don't take our word for it—find out for yourself by using PAX in your washrooms for only six months. Watch the steady drop in consumption and at the end of that period you'll see how much less Pax costs to use than "bargain" cleansers selling at lower prices per pound.

*Name on request.

LET US PROVE PAX IN YOUR WASHROOM...NOW!

Write today on your letterhead for a free half pound sample of PAX-LANO-SAV Heavy Duty Granulated Skin Cleanser. Then at your request our representative will gladly conduct a competitive test between PAX and your present brand—let you and your workers be the judge. There is a complete line of PAX Skin Cleansers and Special Purpose Cleansers—and the finest in its price class. All product names and complete names of the G. H. Packwood Mfg. Co.

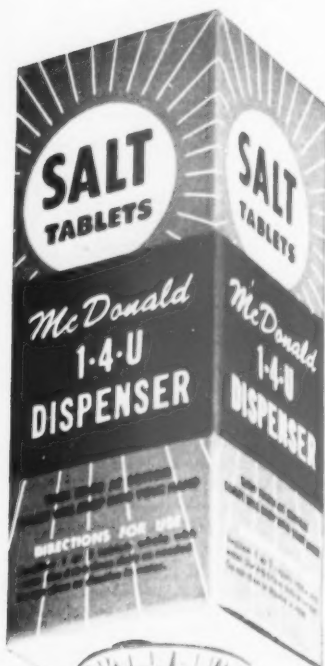
534

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WHEN heat IS OPPRESSIVE

Workers feel better, work better if they take McDonald 1-4-U Salt Tablets. Handy throw-away cartons dispense 1000 or 500 tablets. Three types of tablets—impregnated to prevent nausea; salt plus dextrose; and plain.

WRITE FOR BULLETIN AND PRICES



Cartoon Booklet

(From page 50)

aware of hazards in operation; electric hand-truck operation is a "beginning job" with resultant high turn-over due to advancements; injuries were the result of unsafe operating habits.

The company's safety division realized that a better means of instruction was needed. A committee composed of factory managers worked with representatives of the safety division, advertising department, and automotive repair in composing a method of uniform instruction for all hand-truck operators. This material was presented to foremen throughout the plant for comments and suggestions.

The revised material was turned over to a commercial artist to prepare a cartoon-book style booklet. The decision to use this style was reached because of the success enjoyed by the advertising department with equipment operation manuals of this type used for field instruction of Caterpillar equipment owners.

When the booklet came out in September 1952, the program got under way with a series of meetings to explain the new mode of instruction. The booklet was the subject for safety meetings held during September. In these meet-

ings, conducted for supervisors and union safety committeemen, the need for the booklet was explained. Each foreman and operator was furnished with a copy and an extra supply given the foremen for future use.

The booklet, using diagrams and examples, shows the factory foreman meeting his new operator and showing him the safe operation of the Worksaver. In the end there is a complete summary of safety rules for the machine.

"The apparent simplicity of the electric hand-truck controls leads the new operator to a false feeling of confidence. Therefore, the potential hazards in operation are not too apparent until such time as an injury is incurred. We find a great need for the forming of safe operation habits. These habits should be instilled in the operator at the very beginning of his experience with a hand-truck, and every effort made to encourage him to continue using only standard, safe habits," points out H. S. (Steve) Simpson, manager of Caterpillar's safety division.

This booklet, coupled with the many meetings held to promote safe operation, provided an extremely effective method of combating an accident situation which was causing concern.



At Caterpillar plant, James D. Holt stacks tote boxes with Worksaver stacker. In background, Wesley Gene Ragland indicates proper procedure by stopping his truck until the aisle has been cleared.



electrical

Then here's your hat, the world's most complete protection for electrical workers. Molded Fiberglas withstands standard 40-pound impact resistance tests. Tests 10,000 volts with a maximum leakage of 5 milliamperes.

10 KV CAP

10 KV HAT

Name your industry...

petroleum
aircraft

—or wherever workers prefer metal safety hats? Streamlined aluminum hats are comfortable; they are the lightest safety hats made. Hard Boiled aluminum cap weighs only 10 ounces! Rugged ribbed crown construction gives them extra strength, but still retains resiliency.

ALUMINUM
SAFETY CAP

ALUMINUM
SAFETY HAT



there's a **HARD BOILED*** hat to make it safer!



construction logging

—wherever head protection is essential. Glass Hard Boiled hats, by any test, are easier to wear and greater protection! The crown of this Hard Boiled hat is so tough we had to devise special tests to measure its full ability to protect heads.

HARD BOILED HAT



HARD BOILED CAP



mining

Designed by miners for miners. This hat is the perfect combination of safety, convenience and comfort. Grooved crown holds lamp cord securely. Raintrough edge around hat's edge acts as pad to protect wearers' ears and neck when hat is hit. *Approved!*

LOW COST ACCESSORIES FOR HARD BOILED HATS

EYE AND FACE PROTECTION. Thick, tough, flexible acetate window resists cracking. This specifically selected acetate retains its clearness even in the face of the abrasives it is exposed to in working conditions.

CLIP-ON model. Can be fastened to any safety hat by three tight gripping spring steel clips.

SWING BACK model. Easily attached to any hat by drilling and bolting to the brim.



WINTER LINERS. Three types. Universal type fits all model hats, caps. Fabric exterior, down-like interior. For below zero, use in any combination with Skaters type elastic knit (shown) or Knit Skull type. Liners are fireproofed.

Save money with Hard Boiled hats

Stock only one size. Headbands are quickly adjustable to head sizes 6% to 7%. Headband can be adjusted to a perfect fit in two minutes. Hard Boiled hats are easy to issue—easy to stock and are available in your choice of color.

Distributors in principal cities

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KLEINS



201-NE Plier



5233 Klein-Kord Safety Strap
Also Available in Nylon



5249 Klein-Line Tool Belt



1945 ADJ Climber



1628-3BH Klein Chicago Grip

"Since 1857"

If you've ever been up on a pole fifty feet off the ground—you *know* why the lineman prefers equipment bearing the familiar Klein trademark. For instance—

Klein Climbers take him up and down in safety—provide sure footing while he works.

Klein-Kord Safety Straps provide maximum safety on every job—the red center unmistakably signals when the strap should be replaced.

Klein-Line Tool Belts give the safety, comfort and convenience necessary for fast, efficient work.

Klein Pliers help linemen to do any wiring job better and quicker.

Yes, Kleins are the year-round favorites for safety and service—made by a company with a reputation for quality "Since 1857."

ASK YOUR SUPPLIER

Foreign Distributor:
International Standard Electric Corp., New York

If you have not received your copy of the Klein Pocket Tool Guide, write for one. It will be sent to you without obligation.



Committee to Study Noise Problems

CLAIMS totaling \$2 billion for deafness due to excessive industrial noise are in the courts today. Noise levels in cities and industrial areas are going up to a degree which may endanger the mental and physical well-being of individuals in the vicinity. Noisy machines in factories are creating a newly-recognized hazard—that of accidents resulting from warnings and instructions misunderstood or not heard.

Current pressure from legislative bodies of the states and industry for standard criteria to assist in remedying these conditions has led to the initiation of a research program in the field of noise measurement and control by a subcommittee of the American Standards Association. Vice-Admiral George F. Hussey, Jr., managing director of ASA, has announced.

Claims for compensation for loss of hearing due to industrial noise cannot be settled without adequate bases for determination of causes. Industrial noise limits cannot be set without a sufficient body of bio- and psycho-acoustic data. Noise abatement programs are ineffectual without sufficient scientific information regarding cause and effect. These data are not yet available.

Objective of the new research program will be to explore whether criteria for noise control can be established in the light of presently available bio- and psycho-acoustic data, and to publish such criteria for the use of those interested in industrial noise limits. The committee will study the reliability and statistical significance of various sets of industrial data and data existing in governmental and university laboratories. It will review the methods of measurement by means of which these have been obtained and endeavor to establish recommended noise limits for specific locations and conditions.

Walter A. Rosenblith, associate professor of communications biophysics of the Massachusetts Institute of Technology, has been appointed chairman of the ASA subcommittee to undertake the in-



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vestigations. H. Wayne Rudmose, professor of physics at Southern Methodist University, will act as technical counsel for the group and will be the main investigator.

Assistance to governmental, industrial and medical groups and allied fields in setting up safe limits of industrial noise, in a manner to protect hearing, will be the primary accomplishment of the research. Avoidance of medical and legal complications associated with the noise hazards of modern industrial and military equipment and establishments will also be one of the desired results.

The findings of the subcommittee will be published in the form of a Proposed American Standard, which will be given wide circulation for the purpose of receiving criticism. The approved American Standard on this subject will not be published until a consensus of all those concerned is definitely established.

The ASA Committee on Acoustical Measurements and Terminology, Z24, of which the subcommittee to undertake these investigations is a part, has been working for many years on problems of noise measurement. In 1936 it developed standards for sound level meters for the measurements of noise and other sounds, as well as a standard on noise measurement. These standards have been revised and related ones have been prepared since then. In their present form, these standards are:

American Standard Noise Measurement, Z24.2-1942

American Standard Sound Level Meters for Measurement of Noise and Other Sounds, Z24.3-1944

American Standard Test Code for Apparatus Noise Measurement, Z24.7-1950

American Standard Specification for Audiometers for General Diagnostic Purposes, Z24.5-1951

American Standard Specification for an Octave-Band Filter Set for the Analysis of Noise and Other Sounds, Z24.10-1953

American Standard Specification for Pure-Tone Audiometers for Screening Purposes, Z24.12-1952

Although these and other standards prepared by individual groups exist, a coordinated program on a national level must be firmly based on data such as this research program is expected to develop.

HERE'S THE EXTINGUISHER YOU PICKED AS "EASIEST TO USE" OVER THREE OTHER LEADING BRANDS...



Safety and Plant Engineers—here's how you voted: In a national survey recently completed, 100% of your replies stressed *ease of operation* as a major factor in Extinguisher selection. And on the basis of being "easiest to use", 86% of your replies specified Randolph over the nearest brand—66% specified Randolph over *three* other leading brands, combined!

With no nozzles to adjust, no valves to turn, Randolph Extinguishers are 100% panic-proof. Just snap from the bracket, aim and press the trigger. You KNOW how to use this extinguisher *just by looking at it!*

COMPLETE LINE OF EXTINGUISHERS AND AUTOMATIC EXTINGUISHING SYSTEMS

Make sure your plant is mobilized for fire... with easy to use, simplified RANDOLPH Equipment. Sizes from 2½ to 50 lbs. Manual and automatic systems. Write Randolph Laboratories, Inc., 2 E. Kinzie St., Chicago 11, Illinois.



**FOR
COMPLETE
PROTECTION
AGAINST ...**



Styles illustrated
50-00 Jacket
51-00 Pants
53-00 Hat

Protective Clothing by *Sawyer*

Wears like iron — takes endless rubbing, scraping, snagging, and still gives full protection.

100% Waterproof — made with top quality base fabric saturation-coated first and then coated with 6 coats of Neoprene Latex.*

Positively will not blister, crack or peel. Its longer lasting quality means greater economy.

Also: Three-quarter and long coats, aprons, coveralls and many other styles. All clothing made in black or yellow.

*Sawyer fabrics are coated by
The Brunse Company, a division of



Carnival Celebrates Award



Clowns, signs and pennants at entrance to Tampa's Municipal Auditorium got the Tampa Electric Company's safety carnival off to a good start.

A WEEK long series of parties was given recently by Tampa Electric Company for all its employees and their families, in recognition of its outstanding 1952 accident prevention record for which TECO won the Southeastern Electric Exchange First Place Award in competition with utilities from eight southeastern states.

Tampa electric officials and Safety Director Jack Davis planned the four safety carnivals so that the 2,225 who attended from Winter Haven and Tampa, had the time of their lives.

At each party, employees dressed as clowns, greeted their colleagues by their first names. "This put everyone in just the right mood for the big evening," Davis said.

Calliope music at the entrance, and inside, gave the real carnival touch. The clowns put paper hats on each one coming in and handed each guest a numbered identification tag which was used in awarding door prizes. Everyone received a key chain merit award from The National Safety Council.

Clowns handed out bundles of ten Gannon bucks. These Gannon bucks, named after the company president, Francis J. Gannon, were worth \$500 in trying for prizes.

In an auditorium decorated

with colored pennants and streamers, Davis welcomed the assembled group to the "Safety Spree of '53" and explained what the Gannon bucks were for.

TECO workers tried their luck at wheels of fortune. The food and soft drinks were abundant. A nine act hour-long show and nearly 300 prizes topped off "The Safety Spree for '53."

Emmett Kelly, world famous Ringling Brothers clown, went through his riotous routine with a broom before Davis reviewed TECO's accident experience from 1947 through 1952.

Davis stressed the recognition received by the company from Southeastern Electric Exchange for winning a second place award in 1949 and a third place award in 1951 for only 8 disabling injuries while working 1,409,825 man hours and only 5 disabling injuries while working 1,598,448 man hours, respectively, with no fatalities during either year.

The news of the latest award and its manner of presentation electrified the audience. A large 6 foot by 10 foot black-lighted sign bore this copy: "Announcing 1952 1st Place Winner of Southeastern Electric Exchange Contest." In quick succession, 3 more signs, all in brilliant orange, were

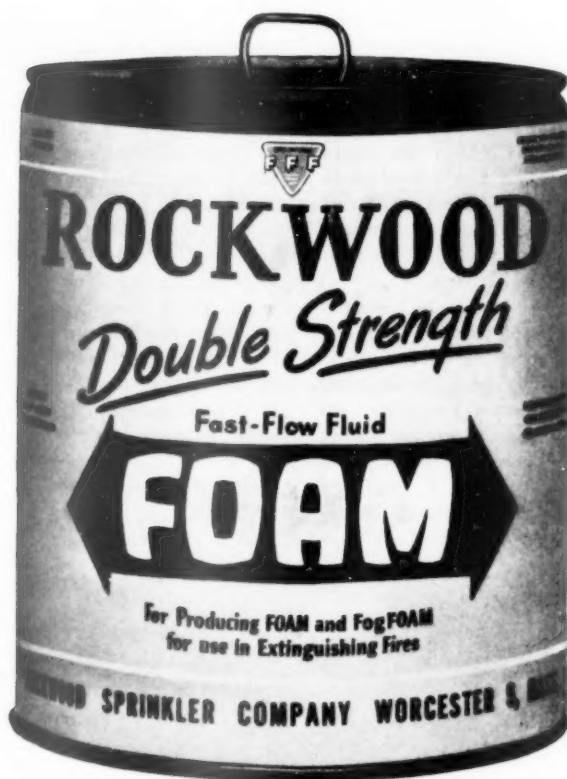
Quenches Quicker!

...with Less Water

that's the Short-Short Story of Rockwood Fire Fighting Aids

That's why fire-fighters like to work with Rockwood's equipment. Take for instance our new contribution to modern fire fighting, the Rockwood Double Strength FOAM Liquid which has many important advantages. Three of these are:

- 1. more fluid
- 2. faster spreading
- 3. flows freely at sub-zero temperatures

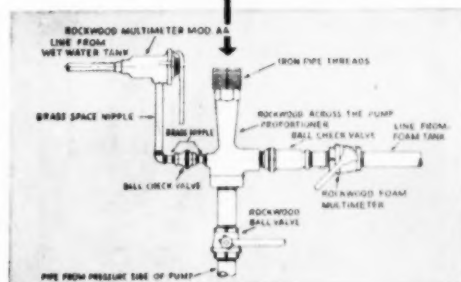


Rockwood's new Double Strength FOAM Liquid will put out fires in flammable liquids faster and at lower cost. Three parts of FOAM liquid mixed with 97 parts of water form an excellent foam blanket that will quickly re-seal if broken. Double Strength FOAM Liquid is more fluid, faster spreading and flows freely at sub-zero temperatures (-15°F.) It is quicker to put into action, covers burning surfaces faster, seals off combustible vapors completely and flows freely around obstructions. This foam blanket has proved its ability to extinguish large spill fires in gasoline with maximum speed and safety to firemen.



ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses



Accurate Mixing Assured: Automatically feeding Double Strength Foam or Wet Liquid into hose lines, Rockwood's Model Dual "B" Around-the-Pump Proportioner is designed for use where pressure is maintained by a pump from either draft supply or booster tank. Multi-meter settings admit proper amounts of wetting agent for varying nozzle discharges and solution strengths.

Special Fire Truck Proportioning Systems for FOAM Liquid and Wetting Agents

Trucks for crash-rescue fire fighting, at airports or for handling spill fires in an oil refinery require special proportioning systems for large volume FOAM discharge through several FOAM turret and hand line nozzles.

Custom engineered proportioning systems to meet these and other unusual requirements are a Rockwood specialty. If you have such hazards let us engineer a proportioning system to fill your needs.

SEND FOR THIS
ILLUSTRATED CATALOG



**ROCKWOOD SPRINKLER COMPANY
72 HARLOW STREET, WORCESTER 5, MASS.**

Please send me Rockwood's illustrated catalog on the complete line of cost cutting, efficiency-boosting products for modern fire fighting.

Name _____
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 Company _____
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at long last!

SAFETY

and

COMFORT



*introduce your
personnel to...*

PLY-GARB

**THE PROTECTIVE
CLOTHING THAT KEEPS
HELP HAPPY!**

Ply-Garb is a brand new concept of comfortable industrial clothing designed to protect your personnel from the hazards of industrial processing. Whether it's acids, oils, caustics, solvents, water or heat—there's a Ply-Garb garment to fit the job!

Ply-Garb is fashioned from revolutionary new plastic weaves, Dynel, Vinyon and Orlon. All garments lockstitched, sewn with synthetic, acid-resistant thread. Also available in plastic films, plastic coated cloth and asbestos-aluminum combinations.



**MAIL THIS COUPON
TODAY!**

THE MILBURN CO. Detroit 7, Mich.

Gentlemen:

Please send me, without obligation, descriptive literature and swatches of Ply-Garb material.

Name Title

Company

Address

City Zone State

shown, spelling out the company name.

After the excitement subsided, Davis announced that there were only 5 disabling injuries with no fatalities in 1952 while working 1,676,911 man-hours. He reviewed the accidents, then presented a lifetime membership in the Wise Owl Club of America to an employee for wearing protective glasses that saved his eyesight in an accident.

Davis introduced TECO Vice President, M. R. McKinley who presented the coveted first place award to the employees and complimented them on their excellent safety record. In recognition for no lost-time accidents, ranging from 10 to 45 years, McKinley presented solid gold lapel buttons to the men and clasps to the women.

The free food and drink concessions were opened up again three more door prizes were given away, the wheels of fortune flourished and a five-piece orchestra played for dancing the balance of the evening at each carnival.

The safety carnivals inaugurated by Tampa Electric Company last year, are part of a realistic campaign that highlights the company's continuous year-round efforts in promoting greater safety consciousness among its employees.

Evidence of the program's suc-

cess over the years is that out of a present total of 804 employees, 388 have received awards for 10 years without a lost time accident and 222 for 20 years or more. Those in the 20 year classification total 90. There are 78 TECO veterans with no lost-time accident records over a period of 25 years; 34 in the group covering 30 years; 14 with no lost time accidents in 35 years; 5 with a 40-year service record and 1 for 45 years service. Francis J. Gannon, TECO president, holds the distinction of being the only one with a 50 year record.

Further emphasizing the important role that safety plays in the progressive policies of the company is the fact that it ranks 4th in the country among companies of similar size and first in the entire southeast among utilities of all sizes.

Three inch decals of the Tampa Electric Company emblem, "Safety Through Skill," are attached to all 199 TECO vehicles as well as to all employees' personal cars. In addition, six inch decals are prominently posted on windows and doors in office and plant facilities. The emblem is also stencilled on all the red flags the company uses as danger signals near crews working in the territory served by the utility firm.

A 200 page manual prepared by Davis and published in 1949



Emmett Kelly, famous Ringling Brothers Circus clown, provided one of the nine acts at the safety carnival for employees and their guests.

Superstitious

.... about Friday the thirteenth?



Mr. Potts peeped at the calendar and almost popped back into bed.

But, tucking his rabbit's foot in a back pocket, he headed for work. Got there in time to hear the receptionist say, "Eleven . . . twelve . . ." Then his feet skidded out from under him, landing him on his rabbit's foot.

"Bingo!" said the receptionist.

The girl apologized. "Sorry, Mr. Potts, but you were the thirteenth person to slip on the floor and today is Fri—."

"I know," said Mr. Potts.

The day's first visitor, a Walter LEGGE Company representative, was waiting for him.

"With all due sympathy," the LEGGE man began, "this may very well be your lucky day."

Mr. Potts rubbed the bruised part of his anatomy. "How so?"

"Friday the 13th would have been just an ordinary day if on Thursday the 12th your cleaning crews hadn't waxed and buffed your floors. The wax gets slick as an ice pond from walking feet. LEGGE Safety polishes make your floors gleam without slipperiness, protecting both floors and personnel. They reduce slip-accidents up to 99%."

"This stuff must cost a fortune," put in Mr. Potts, doubtfully.

"It costs less than you're paying now. Blue chip hospitals and commercial and industrial buildings find our products do a more effective job longer. Their floors rarely need stripping and reapplying. You buy far less polish. And you save up to 50% on labor."



We don't know your pet superstition. But we can save you a lot of hard luck—and money. Clip coupon or write today for full information on LEGGE Safety Maintenance.

Walter G. LEGGE Company, Inc., Dept. N-5, 101 Park Ave., New York 17, New York. Branch offices in principal cities. In Toronto, J. W. Turner Co.

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N5

- ☐ Please send a reprint of this advertisement.
- ☐ Send me your FREE booklet, "Mr. Higby Learned about Floor Safety".
- ☐ Have a Legge Safety Engineer phone me for an appointment.

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DRY CLEANS OILY-SLIPPERY Floors!

Approved by
UNDERWRITERS
LABORATORIES, Inc.



**Tried and proven in
Canfield's own oil
and grease plants!**

Putting Oil-Spunj to work in your plant, factory, warehouse or garage is the quickest, easiest and most economical way of bringing slipping accidents and flash fires under control.

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Memphis, Tenn.; Coraopolis, Pa.

is in the hands of every employee regardless of classification and contains over 1,000 articles of safety information.

"It took me a year and a half to make it up," Davis modestly admitted. "But all I have to do is look at our record and realize that the work involved was well worth the time."

How Sailors Obtain Fresh Water

FRESH WATER for drinking, cooking and mechanical needs at sea is a problem that has confronted sailors for generations. Over the years naval and marine engineers and engineers from industry have worked to develop systems by which salt water could be converted to fresh water.

The solution of this problem has enabled ships to remain at sea for long periods without having to take on fresh water.

The best system had to be chosen for each circumstance. The best method aboard a large aircraft carrier would not be practical in a lifeboat or on a life raft. Factors, other than the size of the sea-going unit, are the carrying capacity allotted for fresh water, the type of main propulsion equipment, and the qualifications of operating personnel.

The most widely used method of salt water conversion aboard naval or merchant ships is distillation.

Submarines, propelled by either diesel engines or batteries, and Landing Ship Tanks (L.S.T.'s) propelled by diesel engines, are small, carry a small number of men and have a small capacity for carrying fresh water. An exhaust gas distiller or a vapor compression distiller is used on this type of ship. In the former the heat from the exhaust gas from the diesel engine is used to evaporate the salt water. The vapor compression or "Kleinschmidt" method uses electric power as its heating medium.

A submarine chaser (PC) will have a vapor compression distiller, since most of these ships are propelled by steam—either geared turbine or turbo-electric.

Naval destroyers (DD) are

larger than ships mentioned this far. They are propelled by steam—usually geared turbine. Since we must have fresh water for both boilers and personnel, we find a change in the basic type of distiller. Greater capacity and higher grade of fresh water (lower salinity in grains per gallon) are needed. Fast steaming express type boilers need a better grade of water than does the human body. Our taste and body can take water with five grains of salt per gallon, but boilers require water with as low as .25 grains of salt per gallon. To accomplish this higher capacity, distillers of the double effect low pressure type are installed. They may be solo-shell or two-shell design.

Larger combatant type vessels require much more fresh water for make-up feed and carry many more men, so the installed fresh water-carrying capacity and the installed evaporating capacity are increased. The most efficient system of distillation used by the navy today is the low pressure, triple effect system. Cruisers, battleships, carriers and large auxiliaries use this method.

By adding shells and reducing pressures within these shells we have been able to turn out more water and better water for less operating cost than with other systems mentioned.

These large sets of low pressure double or triple effect evaporators are often supplemented with a high pressure single effect evaporator. These units are not as efficient as low pressure units, but have certain advantages in contaminated harbors. Higher pressures bring about higher temperatures which kill bacteria, etc.

Other methods of converting salt water to fresh water are the chemical method and the freezing method.

Also, many survivors of lost ships have told stories of obtaining fresh water from fish, birds, rain water and icebergs.

A warning is like an alarm clock; if you don't pay any heed to its ringing, some day it will go off and you won't hear it.

Some men don't break the law, but they sure do bend it a lot.

WORK *in Safety...* WALK *in Comfort*

DORSEY SAFE-T-SHOES GIVE FULL PROTECTION

Protection against accident... Protection against fatigue!

Ruggedly built of select materials from the patented ARMORITE steel-flanged toe to the finest horsehide and cowhide uppers available, Dorsey Safe-T-Shoes are designed to furnish protection where protection counts most, plus solid comfort for long hours under the most severe working conditions. Compare Dorsey Safe-T-Shoes with them all and you, too, will say Dorsey gives greater protection... longer wear... more economy... plus all-day comfort on the roughest jobs.



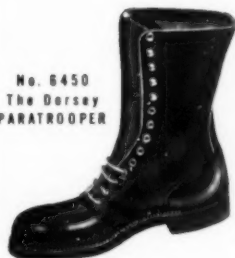
No. 4540

The Dorsey CHAMPION

Outstanding in every way, the Champion is made from triple tanned shell horsehide with full leather toe lining, Dacron stitching and steel arch. It offers the maximum in Safety and Comfort on any job.



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The Dorsey
EXECUTIVE



No. 8450
The Dorsey
PARATROOPER

Dorsey dress Safe-T-Shoes give the same comfort and protection plus a style and quality comparable with expensive nationally advertised footwear... at half their price.



FREE INSPECTION!

Mr. Safety Engineer:
Clip and mail this coupon today!

DORSEY SAFE-T-SHOE Company
1220 Market Street
Chattanooga, Tennessee

Gentlemen: Please send me one pair of your No. _____ Size _____ for free inspection. If not completely satisfied I agree to return these shoes to you within ten days.

SIGNED _____

TITLE _____

COMPANY _____

ADDRESS _____



The *Dorsey* SAFE-T-SHOE CO.
CHATTANOOGA • TENNESSEE

EYE WASHING FOUNTAIN



SAVE EYES!



Leading industrial doctors advise immediate washing with plenty of running water as the best first aid treatment for any chemical in the eyes. Records prove that washing with water for ten minutes or more, close to the accident, is necessary to reduce or eliminate eye damage.

Forehead operation leaves hands free to open eyelids so water can be directed wherever chemicals might be lodged. Sanitary white baked enamel bowl is resistant to most fumes.

Over 500 industrial plant installations have been made to date.

Write For Details.

VALVE
Chain Operated
Quick Action
Self-Closing

NEW
EMERGENCY
SHOWER



Deluge
of Water
30 to 40
G.P.M.

The B & A Shower is the quickest and most satisfactory way to saturate a worker with gallons of water the

Instant an accident occurs, to prevent a disfiguring burn—even a fatality.

Special shower head, no holes to clog—can be used where unfiltered water prevails.

Write For Details

GLASS SLIVERS
AND CHEMICAL
IN EYES!

DISFIGURING
FACIAL CUTS
AND BURNS!

CUTS AND
CHEMICAL BURNS
ON ARMS
AND BODY!

THIS HAPPENS
WHEN
UNPROTECTED
GLASS BOTTLES
ARE DUMPED



NEW
LOW COST
B & A
SAF-T-BAGS



5 PINT
1 GALLON
5 GALLON

are widely used for the safe handling of glass bottles containing harmful chemicals; also the storage and recovery of expensive serums, biologicals, and other costly products.

Painful cuts, disfiguring burns, loss of eyesight, or even a fatality, do result from corrosive liquid splash and flying glass when unprotected bottles shatter.

Write For Details.

BENSON & ASSOCIATES, INC.

P. O. Box 7542, Dept. N.S., Chicago 80, Ill.

Quotable Quotes

... From DR. J. L. ROSENSTEIN

Only recently have industrialists come to realize that the machine is only a tool used by a worker—that it is a mere extension of his fingers and hands. The important element of the combination is man, not machinery.

No workman, regardless of physical condition, can do his best unless he is in good mental health. It is up to industry to provide methods of conserving the mental as well as the physical integrity of its workers.

Executives must learn how to deal with the "human factor" in industry, and the fact that executives have not been able to recognize signs of maladjustment is no reason for complacent acceptance that no problems exist.

Authority vested in a superior in industry is limited in value to the degree to which he can produce in his subordinates feelings of respect, admiration, loyalty, and belief in his sincerity and desire to be fair.

Everyone with or without benefit of study believes that he is a good judge of human nature. Handling men is an art, not a science. In any other art even a potential genius must study formally in order to develop his techniques and abilities to their fullest extent. This should also hold true in the complex art of handling men.

A human being is the product of human hereditary forces acted upon, released, and developed by environmental forces. Heredity provides the foundation and environment provides the structure for mental life.

Heredity has been blamed and given credit for too many things.

Too strong a belief in heredity may kill ambition and the urge to strive by creating a "what's the use attitude," which may be expressed as follows: "If my heredity limits me to mediocrity, why struggle?" or "If my heredity assures superiority, why struggle? I'll be superior anyway."

The human-nature problems one meets in industry are no different from the problems found in everyday life where several people are together for any considerable length of time.

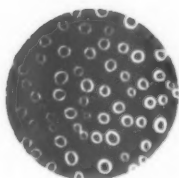
Dr. J. L. Rosenstein was formerly Professor in the Department of Management at Loyola University, Chicago. These excerpts are from his "One-Day Course in Human Relations for Supervisors."

RIGHT IN YOUR OWN BACK YARD...

BY WEST



Fog 1,000 cu. ft. in 3 seconds for 5¢



Top — Magnified photo of uniform 8 micron droplets produced by precision-machined suction nozzles of West Atomizing equipment. "Dry mist" remains air-borne for prolonged periods.



Bottom — Magnified photo of droplets produced by ordinary hydraulic compressor sprayers. Vary from 2 to 300 microns. Larger droplets fall, wetting floors and reducing effectiveness.

— and with only 1 ounce of Vaposector — for complete control of flying insects. Double this dosage for crawling insects.

Impossible? Not with a permanently installed West Atomizer. 10 suction nozzles atomize a "dry mist" of extra-potent insecticide. Droplets are so small they hang in the air... seep into every crack... penetrate delicate insect breathing tubes.

It's an unbeatable combination. High potency Vaposector — sprayed with super-efficient West atomizing equipment. One man does the job. There's only one valve to open. You can fog your entire plant simultaneously.

West has a complete line of insecticides and atomizing equipment ranging from permanent installations to portables. A West specialist will be glad to make a survey and set up an Insect Control Program to fit your needs. Without obligation. Just mail the coupon.



42-16 West Street, Long Island City 1, N. Y.

YES! Tell us about your Insect Control Plan

- ☐ Please send me the West Insect Control Booklet
☐ Have a West Insect Control Specialist call

DEPT. 7

Name _____ Title _____

Company _____

Address _____

City _____ Zone _____ State _____

The position of the Junkin Electro-Lock Shield is controlled by mercury switches. Interlocking power and light circuits will not permit the machine to operate unless the shatter-proof shield is in a completely protective position. Affords perfect visibility, and protects the operator from flying particles. Write for free bulletin No. 103.



**HERE'S HOW
THE ELECTRO-LOCK
SHIELD OPERATES**
—permits clear view
of work, still providing
maximum protection



JUNKIN
SAFETY APPLIANCE CO.
101 S. FLOYD ST.
LOUISVILLE 2, KENTUCKY

HARVEY G. HENSEL, for many years safety director for the Western Division, Steel Mills and Mines, The Youngstown Sheet and Tube Company, retired from active duties on April 1. He is a past general chairman of the Metals Section, National Safety Council, and has been a member of the Section's Executive Committee for many years.

Starting as a railroad man, Mr. Hensel first worked for the Chicago, Burlington and Quincy Railroad, later transferring to the Indiana Harbor Belt Railroad. In 1912 he went to work for Inland Steel Company as a clerk in the Mechanical Department. Three years later he was transferred to the Safety Department. In 1919 he became associated with the Steel and Tube Company of America and organized the Safety and Workmen's Compensation Claims Department. In 1921 he was appointed safety director. In 1923 Youngstown Sheet and Tube Company purchased the Steel and Tube Company and Mr. Hensel was appointed safety director for the Western Division, holding that position until his retirement.

Mr. Hensel is a member of the American Society of Safety Engineers and the Veterans of Safety. He is serving on the General Advisory Committee to the Indiana Division of Labor by appointment of the Governor. He is also a member of the American Steel and Iron Institute, American Hygiene Association, Illinois Manufacturers'

Engineer wanted for National Safety Council, Chicago industrial staff. Age limit 35—degree preferred, but not essential. Must have experience in industrial safety work. Write details of age, experience, etc., and state salary requirements to Chas. F. Alexander, Manager, Industrial Division. All replies confidential.

Association, East Chicago Chamber of Commerce, Indiana State Chamber of Commerce, and Indiana Manufacturers' Association.

ARTHUR F. DUNNEBACKE, safety engineer at U. S. Army Headquarters Depot, Jeffersonville, Ind., has retired at the age of 73 after 25 years' service in accident prevention. During this time he has been safety director for General Motors Corp.; State safety consultant for the Federal Works Agency in Michigan; Safety inspector for the Army Air Forces, and Regional safety engineer for the War Assets Administration.

Mr. Dunnebacke is a graduate engineer from the University of Michigan and a member of the American Society of Safety Engineers. He has been a member of several committees for the development of national safety codes and was active in the organization of the Detroit Industrial Safety Council. He retires to his home in Lansing, Mich.

FRANK E. BURKETT, Freeport, N. Y., has been appointed assistant chief engineer, Construction Service Research of Liberty Mutual Insurance Company.

He started with Liberty Mutual in the New York Loss Prevention department in 1941 as safety engineer. In 1945 he was made supervisor of Construction Loss Prevention Unit and in 1951, assistant division manager, handling all construction loss prevention service for the New York division.

He is a graduate of Northeastern University and a professional engineer of New York. He is also a member of the American Society of Safety Engineers and the Freeport Civil Defense.

ERNEST COOPER, Clarke Sanding Machine Company, Muskegon, Mich., was elected president of the Floor Machinery Manufacturers' Association at its Twentieth Annual Meeting held in Chicago, March 21. He succeeds A. P. Boller, of S. C. Lawlor Co., Chicago, who has held the office for the last two years. Other officers and directors elected are:

Vice-President—J. E. Bates.

NEOPRENE CREPE SOLES

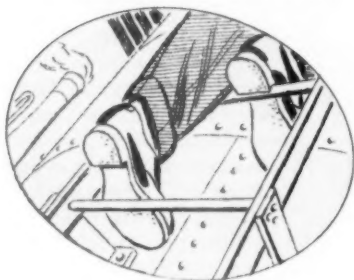
add comfort, durability and good looks
to **HY-TEST SAFETY SHOES**



*Courtesy: International
Shoe Co., St. Louis, Mo.*



Trim and comfortable



Tough and durable

With their handsome uppers and trim neoprene crepe soles, Hy-Test safety shoes have a smart, dress-shoe appearance. And they're at their best on rugged jobs—where springy neoprene crepe pays dividends in day-long foot comfort and exceptional durability.

No working condition is too tough for these flexible soles. They're resistant to grease and oil on factory flooring . . . won't soften or spread on hot deck plates in shipyards. And even sharp rocks on a construction site won't cause them to crack or chip. Yet the durability of neoprene crepe soles is more than matched by their comfort—soft, cushioned foot support that makes standing jobs less tiring.

Such advantages turn inventories into sales. That's why so many designers and manufacturers specify neoprene as a soling material for fast-selling work-shoe and safety-shoe styles.

SEND FOR FREE BOOKLET



E. I. du Pont de Nemours & Co. (Inc.)
Rubber Chemicals Div. NS-5, Wilmington 98, Delaware

Please send me your illustrated booklet, "Neoprene Crepe Soles," containing full information on neoprene's unusual properties . . . data on comparative tests . . . detailed description of its superior qualities.

Name _____ Position _____

Firm _____

Address _____

City _____ State _____

DU PONT
NEOPRENE CREPE



BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY



Here is America's Big-League "SCRUB TEAM" . . . the team that scrubs-out dirt, disease and discomfort . . . the team that plays heads-up ball with industry . . . the team that rents everything worn on the job—coveralls, pants and shirt uniforms, shop coats—and a whole locker room of flame-proofed and water-repellant personal protective garments and accessories . . . the team that provides industry with special laundering services including that new money-saving idea — **GLOVE SALVAGE**.

Want to score new profits?

Then get a first-string member of this "SCRUB TEAM" in your community to play the clean game for you. For his name and an illustrated, 24-page roster of his services, send a postcard to the:

**INSTITUTE of INDUSTRIAL
Launderers**
1627 K STREET, N. W.
WASHINGTON 6, D. C.

Finnell System, Inc., Elkhart, Ind. Secretary-Treasurer—Robert J. Pond, Advance Floor Mch. Co., Minneapolis, Minn. Directors—J. A. Backlund, United Floor Mch. Co., Chicago; Dewey I. Doyle, Doyle Vacuum Cleaner Co., Grand Rapids, Mich.; Gordon E. Kent, The Kent Company, Inc., Rome, New York; N. H. McRae, Multi-Clean Products Inc., St. Paul, Minn.; E. D. Bevirt, Washington, D. C. was reelected executive secretary-treasurer.

Among the scheduled activities for the coming year President Cooper listed: A program of Co-operative Advertising and an effort to secure a revision of the Government Specifications on Commercial and Industrial Floor Machines.

MEMBERS of Underwriters' Laboratories, Inc., at the annual meeting, re-elected all trustees with two exceptions. James C. Hullett, vice-president of the Hartford Fire Insurance Co., and Magnus E. Peterson, resident vice-president and executive Western Department, Springfield Fire & Marine Insurance Co. were elected trustees of the corporation to fill vacancies created by the death of C. H. Smith, vice-president, Western Department Hartford Fire & Marine Insurance Co., and the resignation of W. E. Baldwin, manager for Canada, The Continental Insurance Co., E. A. Henne, vice-president, America Fire Insurance Group, was elected to the executive committee and L. A. Vincent, general manager, National Board of Fire Underwriters, was elected to the Investment and Banking Committee.

The Trustees in their regular meeting re-elected C. R. Welborn, president; M. M. Brandon, vice-president; W. S. Austin, secretary, and H. F. Duncan, treasurer.

RICHARD C. SMYTH, director of employee relations for Arma Corp., Garden City, N. Y., has been advanced to a vice-presidency of the corporation.

This promotion is in recognition of the importance of employee relations in administering corporate affairs. Mr. Smyth will continue to be responsible for all

departments involved in personnel matters, including employment, medical services, safety, plant protection, employee services, wage administration and employee training.

Obituary

W. GRAHAM COLE

The death of W. GRAHAM COLE on April 11 removes one of the prominent figures of the safety movement. In 37 years of active association with accident prevention work, he served in many fields and made many important contributions to the cause.



W. GRAHAM COLE
1890-1953

Born in Baltimore, April 13, 1890, Mr. Cole was graduated from Massachusetts Institute of Technology with the degree of B. S. in Civil Engineering in 1912. He began his career as a draftsman with the Baltimore Sewage Commission and aided in the development of plans for the first sanitary sewerage system for the city.

In 1916 he became safety engineer for the Maryland plant of Bethlehem Steel Company and subsequently director of safety and industrial relations for the Southern Pine Association in New Orleans. In 1921 he became safety engineer for the American Lumbermen's Mutual Casualty Company and later director of conservation, United States Chamber of Commerce as well as secretary

National Safety News, May, 1953



keep your walkways slip-resistant with

tread-sure

the brush-applied abrasive floor coating

Tread-Sure is an abrasive-filled brush-coating, simple and inexpensive to apply on any size area. It produces a long-wearing slip-resistant surface on wood, concrete or steel. Tread-Sure maintains traction and resiliency and is comfortable to stand on, providing a safety footing. For exterior as well as interior use. Three non-glare colors . . . battleship grey, red, green.



SAFETY USES: steps and stair treads, aisles, walkways, ramps, gangplanks, grease racks, work benches, running boards, washrooms, showers, elevator floors, landings, machinery platforms, scale platforms, decks, hatch covers.

SAFETY USERS: industrial plants, food, beverage, milk, packing plants, hotels, hospitals, schools, railroads, utilities, service stations.

A.C. HORN est. 1897
CO., Inc.

Manufacturers of materials for building maintenance and construction
LONG ISLAND CITY 1, N. Y. • Los Angeles • San Francisco • Houston
Chicago • Toronto SUBSIDIARY OF SUN CHEMICAL CORPORATION

A. C. HORN COMPANY, INC.,
Long Island City 1, N. Y.

Please send me ☐ complete data on
TREAD-SURE



☐ free copy of your
106-page Construction
Data Handbook



NS-53

NAME _____ TITLE _____

FIRM NAME _____

ADDRESS _____

CITY _____ STATE _____

Some falls are **FUNNY** (and meant to be)



...others are **COSTLY** (and could be prevented)



To prevent painful injuries and costly outlays for workmen's injury compensation . . .



LAY the groundwork for safer workmanship. Paint SURE-FOOT on your "danger areas" . . . loading platforms, shower room floors, around machines, stairs and drinking fountains, along traffic ways. Adheres to steel, aluminum, wood or concrete. Dries to a tough, non-glare, non-slip finish that resists water, oil or grease. Easily touched-up. Comes in five eye-easing colors; gray, red, yellow, green or black. Easy to use, economical—less than 10¢ per square foot, installed!

FREE! Write for Bulletin 3—1 for complete details.



of the Washington, D. C., Safety Council.

On January 1, 1925, he became associated with the Metropolitan Life Insurance Company, New York, and in 1943 was appointed assistant secretary. At the request of the Federal Relief Administration he was loaned by the Metropolitan to serve as director for the CWA in New York State, organizing and placing in operation a safety program. He took part in the organization of the Greater New York Safety Council.

Mr. Cole was a member of the American Society of Safety Engineers and served the National Safety Council and the Greater New York Safety Council in many offices and in many other unofficial ways. He was one of the founders and was an active member of the Institute of Traffic Engineers.

G. B. BUTTERFIELD

GEORGE BRUCE BUTTERFIELD, 62, secretary of the Hartford Accident and Indemnity Company and a leader in the field of accident prevention, died at his home in West Hartford, Conn., April 1, following a brief illness.

Mr. Butterfield, who had been associated with the Hartford Accident for 26 of his 38 years in the insurance business, was born in Greensburg, Pa., June 17, 1890. He attended public schools in that area and was graduated from Pennsylvania State College in 1913 with a degree in civil and mining engineering. In 1915, following two years' service with several large mining firms in Western Pennsylvania, he became an engineer with the Associated Companies, an organization composed of a number of casualty insurance carriers which pooled their resources to provide coverage for large and unusually hazardous risks. Mr. Butterfield subsequently was named general manager of the Associated Companies' Hartford office.

His career with the Hartford Accident began in 1927, when he joined the Home Office staff as an underwriter in the Automobile and Liability Departments. In 1929, he was appointed superintendent of the newly-created Special Risk

and Engineering Department. He was elected assistant secretary of the company in 1936, and three years later was advanced to secretary.

In addition to directing operations of the Hartford Accident's nation-wide engineering organization, Mr. Butterfield was a nationally prominent leader in safety work. He had served since 1949 as a member of the Conference Committee on Motor Vehicle Administration, which was organized by former President Truman. Mr. Butterfield also was a director and member of the Executive Committee of the American Standards Association and a member of the following: Advisory Committee of the Center for Safety Education, New York University; Engineering and Project Committee of the Association of Casualty and Surety Companies; Advisory Committee of the Association of Casualty and Surety Companies; Committee on Programs and Services, President's Conference on Industrial Safety; Insurance Safety Advisory Group of the Interstate Commerce Commission; Casualty Advisory Council of the United States Aircraft Insurance Group; American Society of Safety Engineers.

ROBERT M. MURRAY

ROBERT M. MURRAY, Chief of the Division of Industrial Inspection, Rhode Island Department of Labor, died suddenly on February 8 in his home in Cranston.

Mr. Murray, who was born in Lochec, Scotland, July 1, 1897, came to the United States 15 years ago. He was prominent in industrial affairs and in safety groups. He was executive secretary of the Governor's Conference on Industrial Safety; a member of the Steering Committee on Accident Records' Analysis and Use of the President's Conference on Industrial Safety; general chairman of the Textile Section, National Safety Council, 1949-50, and a member of the Rhode Island Safety Commission.

In 1950 he was chosen by the Department of State to represent the United States at the International Conference on Textile Safety held in Lyons, France.

Mr. Murray was executive sec-

*When You Need Better Chain...
Get the Best*



GET *Round* CHAIN

Outside, *Round* Chain, made by *Round* Chain Companies, might look like other chain, but there the similarity ends. Inside, *Round* Chain is superior—superior because it is the result of generations of chainmaking experience . . . PLUS recent new developments by *Round* metallurgists.

This experience and these developments make possible chainmaking advantages like these:

- Choosing the kind of raw metal best suited for making each type of chain.
- Forming and welding techniques which assure maximum link strength.

- Heat treating in special furnaces with automatic controls for maximum hardness and toughness.
- Producing at a rate consistent with quality control.
- Inspecting by microscope and spectroscope to check on physical composition and to detect flaws.

Next time you need chain, remember it's what is *inside* a piece of chain that determines the service and life you'll get from it. Today as always, the *IN*side of *Round* Chain is the source of its superiority . . . is the factor that enables it to merit the term "BEST".

Next time, get the BEST. Get *Round* Chain.

Wherever you are... you're near a Round Chain Factory

ROUND SEATTLE CHAIN CORP.
Seattle 8

ROUND SEATTLE CHAIN CORP.
Portland 10

THE ROUND CHAIN & MFG. CO.
Chicago 38

THE CLEVELAND CHAIN & MFG. CO.

OHIO HOIST & MFG. CO.

THE PLATING AND GALVANIZING CO. Cleveland 5

ROUND BRIDGEPORT CHAIN & MFG. CO.
Bridgeport 1

ROUND WOODHOUSE CHAIN & MFG. CO.

ROUND ALLOYS MFG. CO.
Tronton 7

ROUND CALIFORNIA CHAIN CO.
So. San Francisco

ROUND LOS ANGELES CHAIN CORP.
Los Angeles 54

THE SOUTHERN CHAIN & MFG. CO.
Birmingham 4

THE OLDEST NAME
Round
IN CHAIN

The Round Line Includes Welded and Weldless Chain for Every Purpose
Commercial • Industrial • Automotive • Farms • Homes • Construction
Logging • Marine • Oil Field • Railroad

Related Round Products
Chain Fittings and Accessories • Electric and Hand Hoists • Turnbuckles
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ORDER FROM YOUR WHOLESALER

CUT DOWN ACCIDENTS! with our proven **AWARD INCENTIVE PROGRAM**



Designs and Quotations submitted without obligation.

Write for our
"SAFETY AWARD" CATALOG

Send for
FREE Sample
of our 1½"
Celluloid
Pledge
Button



AWARD INCENTIVES, INC.

200 William Street New York 38, N. Y.

INDIVIDUAL CUTTING OIL SANITATION

FOR YOUR PLANT!

Here's how to prevent costly coolant spoilage and eliminate foul odors: Ask your DOLGE service man to take samples of your coolant for free bacteriological and chemical analysis. A complete laboratory report will show the correct coolant handling method for your particular operation.

Only if tests warrant it will a DOLGE STERIDOL GERMICIDE be recommended — a "tailor-made" preparation to meet your exact needs. Used as directed it will not irritate the skin or corrode metals. The cost?—Far less than a cent per gallon of coolant!

Write for Booklet "Cutting Oil Sanitation."

STERIDOL
dependable
DOLGE
WESTPORT, CONNECTICUT

retary of the Industrial Code Commission for Safety and Health; a past treasurer of the Rhode Island Safety Association; chairman of the committee on machine guarding of the International Association of Government Labor Officials; a member of the national board of boiler and pressure vessel inspectors; a member of several sectional committees of the American Standard Association; an honorary member of the International Society of Fire Chiefs; a member and past commander of the Yankee Division's Veterans' Association; a veteran of World War I, and a member of the Phillips Memorial Church, Cranston.

The President's Medal

Awards made by the National
Safety Council for successful ap-
plication of artificial respiration

RONALD E. SWANSON, ground-
man, The Montana Power Co.,
Helena, Mont.—electric shock.

WALTER L. CURTIS, electric
appliance serviceman, Gloucester
Electric Co., Gloucester, Mass.—
suffocation.

F. A. MILHEIM, pipefitter, The
Texas Company, Clarksboro, N. J.
—gas asphyxiation.

I. A. WILLS, shift foreman, The
Texas Company, Woodbury, N. J.
—gas asphyxiation. Certificates of
Assistance to R. D. HUMPHREYS,
F. A. MILHEIM, STEPHEN KUNA.

MRS. WALTER FUNK, housewife,
Ft. Wayne, Ind.—drowning.

IRA SHAFFER, General Electric
Co., Ft. Wayne, Ind.—drowning.

EUGENE W. BURKS, operating
superintendent, Pickwick El. Mem-
bership Corp., Selmer, Tenn.—
electric shock.

Fire Training School Starts Classes Soon

A record number of nine differ-
ent fire training school classes—
each lasting three days—has been
scheduled by the Ansul Chemical
Company on the company test
field at Marinette, Wis., this
spring and summer.

This is the tenth year that the
school has been held and attend-
ance will be larger than ever. Last
year approximately 150 students
attended the Ansul school. With
enrollment for each class limited
to 25 persons, attendance this year
will reach about 225—a new rec-
ord.

Ansul's fire school draws its
students from the fire and safety
engineers of industry, from mu-
nicipal fire departments and from
the military services. The students
are schooled in the latest tech-
niques of fighting fires in flam-
mable liquids and gases, using
dry chemical and other types of
extinguishers.

Last year approximately one-
half of the enrollment was from
metal fabrication or chemical
companies. Representatives of the
petroleum industry accounted for
about 16 per cent of the total en-
rollment, while others represented
the gas and electrical utilities, the
steel industry, railroads, airlines,
buslines, trucking companies, the
paper, food and mining industries,
and the military services.

This year, the first class, sched-
uled for May 25-27 is being re-
stricted to persons attending the
National Fire Protection Associa-
tion meeting in Chicago. However,
enrollment for all other classes is
open on a "first come, first served"
basis.

Dates for the classes are: May
25-27 (NFPA), June 8-10, June
15-17, June 29-July 1, July 27-29,
August 17-19, August 24-26, Sept.
14-16, Sept. 21-23.

Begun as a service to Ansul
customers, the school has been
broadened to the point where fire
officials and safety engineers from
all over the world have attended.
After learning the latest tech-
niques of using dry chemical fire
equipment, they take this knowl-
edge back to their home com-
panies and pass it on, improving
the level of their fire protection
service.

The school is conducted on the
company's eight-acre fire test field,
one of the best equipped test fields
in the country. The field has fa-
cilities for simulating almost every
type of fire to be found in indus-
try, including gasoline spill and
pressure fires, propane pressure
fires, and others.

Why Skin-toughening PREVENTS ATHLETE'S FOOT

SHOES CAUSE ATHLETE'S FOOT



The modern shoe is the main cause of athlete's foot, says the U. S. Public Health Service (Bulletin R-674). Shoes soften and devitalize the skin. This soft, dead skin inside a warm dark shoe is ideal soil for the growth of athlete's foot fungus.

FUNGUS SPORES ARE EVERYWHERE

The fungus spores, or seeds, are as common as dust. Some of them are on the skin almost all the time. And when the skin's resistance is low, they grow and multiply. The result is athlete's foot.

The chief danger of athlete's foot is that it causes cracks in the skin. More dangerous germs can then enter the blood stream. Serious secondary infections may result.

DISINFECTING THE FEET WON'T HELP



Attempts to disinfect bathers' feet are "futile, illogical, and potentially harmful," according to skin specialists.* You can't kill all the fungus spores, and you may weaken the skin still more by trying to kill them.

WHAT IS THE ANSWER?

Skin specialists say that the best chance of preventing athlete's foot is to build up the skin's resistance to fungus attack.* A strong healthy skin is your best defense against the ever-present fungus spores.

That is the basic principle of Onox skin-toughening.

*Archives of Dermatology & Syphilology, April, 1942.

WHAT IS ŌNOX?

ŌNOX is an odorless, non-poisonous solution of five beneficial mineral salts. Both laboratory† and controlled tests show that Onox toughens the skin and makes it resistant to fungus attack.

†Pease Laboratories, Inc., New York, N. Y.

IT'S EASY TO USE

Onox is used in a soft sponge rubber mat. One mat serves 50 bathers on a shift. Stepping on the sponge (after showering) forces Onox up between the toes, where it is needed. A good percentage of the salts stay on the skin, even after drying with a towel.

MEN LIKE TO USE THE MATS

The sponge mat is pleasant to step on. It is neat and attractive—no splash, no mess. And Onox is very refreshing to tired, aching feet.

FREE BULLETINS AND LEAFLETS

Free bulletins are sent you each month. These, along with easy-to-read leaflets, explain the need for skin-toughening. Customers report excellent results with this free service material.



Ōnox skin-toughening is used by over 70% of the largest manufacturers in the U.S.A.

ODORLESS
EASY TO
MAINTAIN
NOTHING
TO GET OUT
OF ORDER



**COST IS SMALL—
1¢ PER MAN PER WEEK**

TRIAL OFFER... We will ship any amount of Onox and footmats for 60 days' use. If you and your men are not more than satisfied with results, you owe us nothing. For further information, write, or send coupon.

Ōnox, Inc., 119 Second St., San Francisco 5, Calif.
(Warehouses: Brooklyn, Cleveland, New Orleans, Los Angeles)

Send free catalog—no obligation—about Onox.

☐ We have showers. ☐ We plan to have showers

Name.....Title.....

Company.....

Address.....

City.....Zone...State.....



IT LOCKS — IT HOLDS

You
Can't
Fall

It is
a Life
Saver

SAFETY DEVICE FOR LADDERS

Prevents Injuries by Falling

EASILY TO INSTALL

Fastens to Rung, Peg, Pole or Frame

SIMPLE TO OPERATE

Men Can Climb—No Instruction

SAFETY SPECIFICATIONS

High Safety Factor—
Will Not Rust or Corrode

Write for Folder

Safety Tower Ladder Co.

P.O. BOX 1052

BURBANK, CAL.

STOP THAT FALL



SAFETY LIFELINE LOCK for SCAFFOLDS and SWINGS

Locks automatically and instantly.

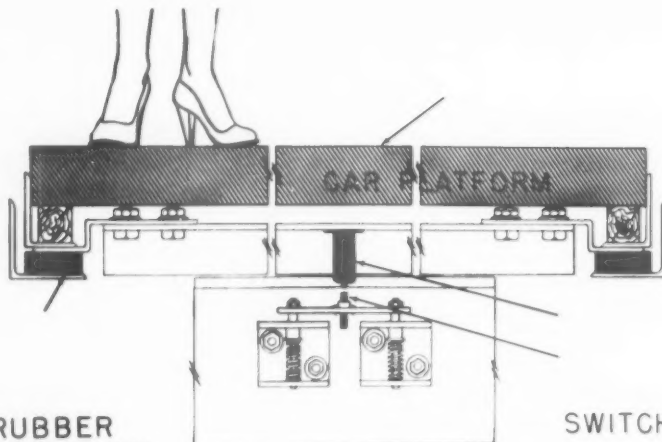
Slips on ordinary rope lifeline at ground. Moveable up or down with man, in instant locking position at all times, whether stationary or being moved up or down.

Snap into safety belt, no adjusting.

Safety Tower Ladder Co.

1024 Burbank Blvd.
Burbank, Calif.

Too Big a Load, Elevator Won't Move



RUBBER
ISOLATION
BLOCK

SWITCH
TRIPPER

On an attendant-operated elevator, it is the responsibility of the attendant to limit the number of people in the car, not only for the convenience of the passengers but also for their safety. For this reason, various codes relate the area of the floor of the car to the rated capacity of the elevator.

With operatorless elevators there is no attendant to count the number of passengers in the car so some other means must be devised to fulfill this function. Otis does it by weighing the passengers in the car. A device goes into action when the weight of the passengers on the platform reaches a certain percentage of the rated capacity of the car.

Most modern elevator platforms are mounted on compressible rubber sound isolation blocks, which were originally designed to isolate the vibration of the car frame from the platform and cab. These rubber pads are compressible and the slight movement as the load changes, is sufficient to operate a sensitive switch mounted under the platform.

Normally, this device is adjusted to operate at approximately 80 per cent of the rated capacity of the elevator and its operation can initiate at least two important operations of the elevator:

1. When the car is at a terminal floor and taking on passengers, the device will operate when the number of

passengers that have entered the car weigh in the aggregate 80% of the rated capacity of the car. When this point is reached, the doors automatically start to close and the car is dispatched on the trip without waiting for the time to elapse for the normal dispatching interval. Thus it saves time by dispatching a full car ahead of its normal schedule.

2. When the car is traveling down and the number of people weigh more than the 80 per cent of capacity, the operation of this device will automatically cause the car to "by-pass" all additional hall calls—but answering, of course, "within the car calls"—until the car is lightened by the transfer of passengers. The hall calls that have been by-passed, of course, remain registered and the next available car, traveling in the proper direction will stop and pick up the waiting passengers. Thus the load weigher also speeds service by non-stopping a full car.

Railroad Produces Cartoon Movie

Close Call for Jimmy, new cartoon motion picture, carries a safety message to elementary school children in 13 states served by the Baltimore and Ohio Railroad.

This sound-color film stars Uncle Bob, locomotive engineer, and Jimmy, a young boy fascinated by trains. In a dramatic climax, Jimmy tries to stop boys from tampering with a switch, but he is beaten up and left unconscious in the path of an approaching train. Uncle Bob risks his life

DIRTY GLASSES

like dim lights and dull tools

make MISTAKES



keep them **CLEAN** with **SIGHT SAVERS**

the Dow Corning **SILICONE** treated tissues

Install **SIGHT SAVER** Cleaning Stations

Increase production, improve quality

Employees work more rapidly, more accurately and with less eye fatigue when their glasses are Sight Saver clean. Sight Saver tissues are the most convenient size to use; contain exactly the right amount of the right kind of silicone; save time wasted on less effective cleaning methods.

Inexpensive to install and maintain

Adhesive mounting strips supplied for easy installation on metal, wood, glass or tile walls. Foolproof dispenser eliminates waste, issues a single 3"x7" tissue at a time. No maintenance required. Simply insert refill packets as required.

Preferred by millions of people

Sight Saver Cleaning Stations are specified by most Safety Directors because the superiority of Sight Saver tissues has been proved by world-wide distribution and repeated use by millions of people.



MACHINE SHOP

LABORATORY

OFFICE

WELDING SHOP

Quickest and easiest way to clean glasses. Like modern car polishes, Sight Savers contain a Dow Corning Silicone product that simplifies cleaning and polishing; gives added clarity and luster to glass; keeps dirt and oil from sticking to lenses.

Make eye safety programs more effective. Attractive Sight Saver Cleaning Stations encourage employees to keep their glasses clean; remove the best excuse they give for not wearing safety glasses.

Available from leading
Safety Supply Houses

Cat. No. 60 Black Dispenser.....\$2.50
Cat. No. 61 White Dispenser.....\$2.50
Cat. No. 62 Safety Green Dispenser \$2.50
Cat. No. 65 Refill Packet
contains 800 tissues...\$1.45

First
in
Silicones

**DOW CORNING
CORPORATION**

Atlanta
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USE
Tamms
FULLER'S EARTH

Adds greatly to the safety of your shop • Provides safe non-slip footing • Absorbs oil and grease • Lessens fire hazard because, unlike saw dust or wood shavings, it is non-inflammable • Every shop needs this low cost safety aid.

A trial will convince you.
Send for **FREE SAMPLE**.

TAMMS INDUSTRIES, INC.

Dept. RM 10 • 278 N. La Salle St. • Chicago 1, Ill.



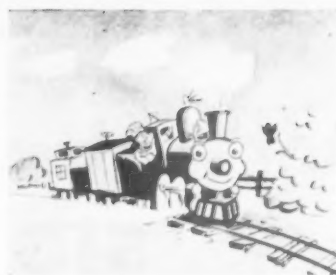
For
Safety
Guard-Ann
Hat

Combines utmost protection and style. Exclusive patented features found in no other hat.

**Write for Free Sample
or Order Direct from us**

\$15.00 dz.

CHIC MAID HAT MFG. CO., Inc.
630 HIGH STREET
BUFFALO 11, N. Y.



to rescue Jimmy from his close call with death.

Close Call for Jimmy is a sequel to *The Happy Locomotive*, which was shown to more than 1,250,000 children in 4,000 schools in B and O territory in the past two years. During this time there has been a 75 per cent reduction in juvenile trespassing and the B and O juvenile safety record has shown sharp improvement, according to H. L. Denton, B and O general superintendent of police.

Close Call for Jimmy portrays safety tips in colorful fashion and the dangers of throwing missiles at trains, placing obstacles on tracks, shooting at signal equipment, playing on the right-of-way, climbing on freight cars and installations in railroad yards.

It helps make children aware that grade crossings are the right place to cross the tracks and points out to adults the importance of extra driving caution at rail-highway intersections.

A uniformed B and O patrolman gives a short talk before the screenings in the schools. The pupils are given an illustrated booklet which carries the railroad safety message styled for youngsters.

Close Call for Jimmy was produced for the B and O by Stephen Fitzgerald and Co., and Unifilms, Inc.

Group Studies Vision Improvement in Blind

"Improving vision among the blind is a real possibility," Peter J. Salmon, Executive Director of the Brooklyn Industrial Home for the Blind, said recently in an address before the annual sight-saving conference of the National Society for the Prevention of Blindness.

Mr. Salmon said that as many as "50 per cent of those classified

as blind have some remaining sight," and he called this residual vision "priceless to those who have it. There is therefore a community of interest between those who serve the blind and those who strive for the prevention of blindness . . . care and conservation must be a part of the education of every human being," he added.

Mr. Salmon, who is himself classified as blind, told the conference that he spent years "struggling with magnifying glasses, trying to hold a book or other literature and ending up always with headaches and nausea from extensive reading."

After painstaking effort, Mr. Salmon said he finally obtained a set of special telescopic lenses.

"With these lenses I obtained sufficient correction so that it is possible for me to read indefinitely without discomfort—newspapers, magazines, and in fact, anything that one would be apt to read. With the far vision I obtained, I was able to see a ball game for the first time.

"For you who read without difficulty, this would seem like a relatively unimportant thing, but for me it has made the difference between night and day. For me it has meant a new life."

Mr. Salmon reported that the Industrial Home for the Blind is waging "a three-pronged attack on the conservation and improvement of vision.

"The creative, the research and the corrective approaches must be made to the problem as to all other problems of service. Creative through education. Research through the bringing together of all devices, appliances and thinking that may aid in the improvement of vision. And finally, the creative and curative in the application of these findings to individual needs."

The Industrial Home for the Blind, in cooperation with the American Foundation for the Blind, is now gathering information on devices concerned with the improvement of limited vision, Mr. Salmon said.

"What we plan to do specifically is to have our ophthalmologist screen the blind persons with some remaining vision who he feels



SELLSTROM *Quality Eye and Face* SAFEGUARDS

Published by Sellstrom Manufacturing Company, 622 No. Aberdeen St., Chicago 22, Ill.

TOP QUALITY HELMET WITH YOUR CHOICE OF FITTINGS



It's big and roomy but not too bulky. It's the Sellstrom 244 three-piece helmet made of .055 vulcanized fiber; offers full protection: top, bottom, front and sides. Equipped with the Standard Headgear, which is easily adjusted for size, has an adjustable vulcoid strap over the head, genuine leather sweatband. Standard Front Loading Plate Retainer of plastic and steel combines light weight construction, durability and simplicity of operation. Inner and outer frame are bolted into place. Spring holds plate firmly in position. Front loading style permits quick replacement of plates; can change cover plate without disturbing filter plate.

TWO OPTIONAL HEADGEARS



Presto Shield Headgear. This is the Sellstrom "P" headgear, equipped with automatic eye shield of clear plastic, offering full eye protection when the hel-

met is raised. The eye shield is a part of the headgear. When the hood is down, the eye shield is above the head. The moment the hood is raised, the eye shield automatically lowers to give full protection to the eyes. On special request a green eye shield can be furnished instead of the standard clear plastic shield.



Sel-o-Matic Headgear. The "M" identifies this headgear on any Sellstrom helmet. Here are a few of the outstanding features: (1) Can be adjusted with one hand while the helmet is on the head. (2) Once adjusted, it remains secure until changed by human hands. (3) Can be used with any and all styles of Sellstrom helmets. (4) Any worn parts can easily be replaced by a layman. (5) So far as is known, this is the only headgear with the teeth cut in a special plastic impregnated tough vulcoid fiber, impervious to water and moisture. The vulcoid is a special tough material, is stronger and keeps its shape better than material which absorbs water or moisture. (6) The back sectional sleeve and the adjusting knob are made of strong plastic. (7) The three round knob holes give the headgear three sets of teeth and permit this "Sel-o-Matic" headgear to outlast and outwear three ordinary headgears. (8) Equipped with a standard sweat pad, kept in place by real sweat band leather and glove fasteners.

OPTIONAL NEW "S" LIFT FRONT PLATE HOLDER



"S" always identifies the new Lift Front Plate Holder when this letter follows the helmet number. Designed for rounded helmets. This new plate holder is molded from heat resisting Durez, with a pressed steel cover front as an extra protection if accidentally dropped. It combines light weight and strength, is absolutely light proof. The inner clear

safety plate is mounted in a stationary frame, separate and behind the movable filter plate mounted in the door of the plate holder. When the filter plate is lifted for clear vision, the clear plate fully protects the eyes from flying slag. The filter plate and the clear plate are held in place by separate tension springs. The window is firmly kept in an up or down position by hidden springs in the hinges. The cover plate can be changed without removing the filter plate. The filter plate window or front section telescopes into the inner section to eliminate all light at the edges and corners.

"ABSORBAND" SWEAT BAND STOPS PERSPIRATION BLUES



How can industrial workers do an efficient job if they have the hot weather perspiration blues, with the sweat from the forehead constantly running into their eyes?

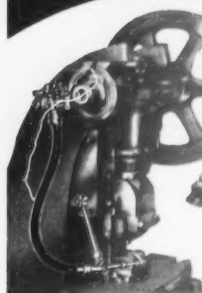
Some years ago Sellstrom solved this problem by manufacturing what is now our No. 440 "Absorband" felt sweat band. It is made of the finest obtainable absorptive white felt, treated to absorb a great deal more perspiration than ordinary felt. Each "Absorband" comes in an individual sanitary envelope. When saturated with perspiration it can easily be rinsed in water, wrung out, and is again ready for use. It fits snugly on the forehead and is kept in place by a flat elastic band. Before using this sweat band it should be dipped into water and squeezed out as it will absorb more perspiration moisture when moist.

During the past few summer seasons the sales of this sweat band have grown enormously. Each year the former buyers repeat, while there are always a number of new customers. This is natural as the use of "Absorbands" greatly increases working efficiency. Because of their low cost each "Absorband" can actually pay for itself half a dozen times a day—increased production is made possible as workers do not have to stop every few minutes to use a handkerchief to wipe the perspiration from their forehead. It should be a hot weather "must" in every industrial plant.

If your dealer does not handle this "specialty", write us direct for prices and a free sample for test purposes.

LET'S SAVE All FINGERS

They're Precious... and Costly!



LITTELL
AIR BLAST VALVES
 Pieces forced out
 safely by air.

Blank parts weighing
 up to 2 lbs. are blown
 out of press with a
 standard Air Blast
 Valve.

← Eject
 by AIR
 not with fingers.

Feed by AIR
 not with fingers. →

LITTELL
Pres-Vac SAFETY FEEDERS
 Blanks fed from a safe
 distance of 14 inches.

Pres-Vac operates from compressed
 air at 45 lbs. pressure which passes
 through a venturi to create a vacuum.

Keep Fingers Out of Presses!

AMPUTATED FINGERS COME HIGH!

Above figures are based
 on maximum rate of
 Illinois Workmen's Com-
 pensation from Division
 of Statistics and Re-
 search, Illinois Indus-
 trial Commission.
 (Figures for some
 states are higher.)

F. J.

LITTELL

Speed
with Safety

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CO.**

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CHICAGO 13, ILL.

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for
catalog

DUNKING STATIONS!

During the past 7 years, hundreds of plants have discovered SIPCO "Dunking Stations" are the "all time" solution to their plant smoking problems.

Built for hard industrial use—and abuse! Cigaretts, cigars, matches extinguished immediately—no smoldering—no fire hazard.

Unit No. 1—Heavy cast aluminum canister, attractive metal sign, upright and heavy weighted base for use on floors, aisles, etc.

Unit No. 2—Same as Unit No. 1, except without upright and base. Easily mounted on walls, columns and posts.

Unit No. 3—(Not illustrated) Canister alone, with mounting bracket.

Send TODAY for new illustrated folder which gives complete details.



Make-shifts
 won't do
 the job—
 Dunking
 Stations
 will!



STANDARD INDUSTRIAL PRODUCTS CO.

Dept. A.

116 So. Garfield Avenue

Peoria, Illinois

can be tested for special correction through magnifying glasses or telescopes.

"Correction may sometimes be a limited thing," Mr. Salmon pointed out, "possibly only giving the ability to tell time or to look up a word or a phrase. But to a person who has not previously been able to accomplish this—even though the device he must use may be cumbersome—the thrill that stems from the ability to do even this much for himself is beyond measure.

"What we are attempting to do is bring together in one place as much of the experience and research of the past as we can, and then disseminate as much information about it as possible, so that a more concentrated effort can be made on the more practical aspects of correction.

"If all who are interested know what has been accomplished already, it will be easier for them to begin with knowledge rather than with zeal alone."

Mr. Salmon also reported that in order to reduce physical strain, great emphasis has been placed on automatic and semi-automatic machinery in the Industrial Home for the Blind.

"There are a number of eye conditions which require limitation of work on the part of the individual," he explained. "We have watched this aspect carefully and have reduced these stresses and strains and physical efforts to a minimum."

GE Demonstrates New Junction Transistor

The General Electric Company recently demonstrated a new hermetically-sealed junction transistor, said to eliminate temperature and humidity restrictions which have prevented wide use of transistors in commercial and military electronic equipment.

Transistors use a crystal of germanium to perform many of the functions of much larger and more complicated electron tubes.

The company's engineers said the new transistor operates efficiently in temperatures as high as 212 degrees F. and under the most adverse humidity conditions, a feat they predicted will speed

A FALL-PROOF
Reminder

Hillyard Treatment

**NOW—will save
Accidents LATER!**

Hillyard treatments for floors that the public walks on and works on have won Underwriters' Approval as slip-resistant. You get tougher resistance to traffic or hauling, longer wear for flooring materials—more ease of maintenance—to reduce costs all around.

These advantages are your guarantee of safe floors—and the Time to Hillyard-treat your floors is NOW—before, not after, accidents happen.



**WRITE
FOR
FREE
SURVEY**

Your floors and your floor problems will be thoroughly analyzed. The Hillyard Maintaineer (floor expert) is on your staff, not your payroll for consultation and demonstration of Hillyard treatments, specialized for fall-proof floors



You know it's right
—if it comes in the
checkerboard drum.



St. Joseph, Mo.

**EXTRA
PROTECTION**



NO 2424

**against FIRE
THEFT · SABOTAGE**

**In the
silence of the night**

the watchman makes *his* rounds while the hands on his CHICAGO Watchclock make *their* rounds.

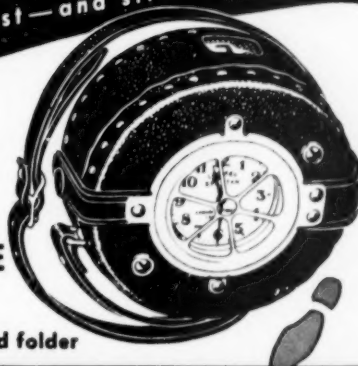
In the morning, there is a permanent dial-record of exactly where the watchman was during each hour...in the silence of the night.

The tamperproof CHICAGO Watchclock system is approved by both THE UNDERWRITERS' LABORATORIES and by THE FACTORY MUTUAL'S LABORATORIES. It gives extra protection against fire, theft and sabotage.

**CHICAGO
WATCHCLOCK**
The first—and still the first

**Quickly
pays for
itself...
REDUCES
INSURANCE
RATES**

Send for illustrated folder

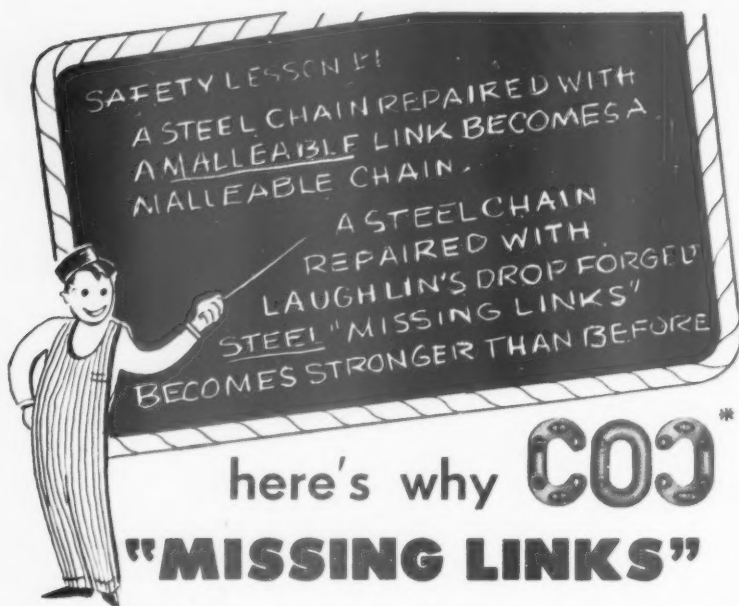


CHICAGO WATCHCLOCK

DIV. GREAT LAKES INDUSTRIES, INC.

1524 S. WABASH AVE., CHICAGO 5, ILL.

OFFICES IN PRINCIPAL CITIES



here's why **COO** **"MISSING LINKS"** REPAIR CHAINS BETTER

"MISSING LINKS"

MATCHED

Made with special dies so that each half is pressure fitted. This eliminates play between the forgings, insures perfect fit when riveted into chain. There is no strain on the rivets.

INTERLOCKING LUGS

More costly to put in the dies, but they grip firmer and really do the work of taking the load.

Laughlin "Missing Links" are made of carefully heat treated, high grade steel. They have features found in no other repair links, and are also supplied in an exclusive pear shaped design in sizes for $\frac{3}{8}$ " to $1\frac{1}{8}$ " chain.

ORDINARY LINKS

UNMATCHED

When loose fitting links are put into a chain and the load is applied, the rivets take most of the strain and tend to shear until the links set. This may later cause the link to open up under heavy load.

ROUND LUGS

Ordinary round lugs fitting into round holes don't have the holding power, tend to shear or force out under strain.

Buy From Your Local Distributor

He is in business to give you prompt, courteous service and to save you money, time and trouble. He's your one best source for industrial supplies.



**FOR SAFETY'S SAKE
 SAY**

THE THOMAS
 LAUGHLIN CO.
 53 Fore St., Portland, Me.

LAUGHLIN

* T. M. Reg.

its commercial and military applications.

To demonstrate these points, G.E. is operating a pre-production model of the new transistor in a jar of boiling water at the annual convention of the Institute of Radio Engineers. The tiny unit is the heart of a small radio transmitter, perched atop the jar. Its transmissions are received by a table model radio a few feet away.

The development of the new transistor has been conducted by G.E. under a contract with the Air Force, Signal Corps and Navy. Automatic machinery for its production is being developed under a Signal Corps contract.

Small quantities of the new transistor will be made available to development laboratories and engineering groups within a few months, according to James H. Sweeney, G-E sales manager for germanium products. Mass production is scheduled for this fall at the company's germanium products plant at Clyde, N.Y., he said.

Military electronic equipment must operate under temperature and humidity conditions anywhere on earth, or in the air, and therefore must use components capable of functioning reliably at all times, Sweeney said.

This is also true of some commercial electronic equipment, he explained. For example, two-way radio equipment, such as operated by police and fire departments, normally is installed in the trunks of cars. Temperatures here may reach 140 degrees F, with proportionately high humidities. Transistors must be hermetically sealed to maintain correct operating characteristics under these conditions, he said.

First use of the new transistor is expected to be in military electronic equipment, particularly communications and radar devices, Sweeney said.

Early commercial uses are expected to be in hearing aids, automobile and portable radios. Use of the new transistor will permit operation of auto radios direct from 6 or 12 volt batteries, without the vibrator presently used to convert these voltages for electron tube operation.

The new transistor operates on the diffused junction principle,

which produces different operating characteristics than whisker-type transistors, which have been produced by G.E. for several years. These different operating characteristics permit the transistor to be used in a greater variety of applications.

Hildegard Named Miss Green Cross of 1953

The National Safety Council has announced that Hildegard, the International chanteuse, had been named Miss Green Cross of 1953.

The entertainer received a plaque from Dr. J. C. Geiger, Chairman of the 1953 Green Cross Membership Campaign for the Eastbay Area, in Northern California.

In making the presentation Geiger stated: "It is a privilege to present Hildegard this citation naming her 'Miss Green Cross of 1953,' in recognition of the many times she has given of her time and talent in the cause of Safety."

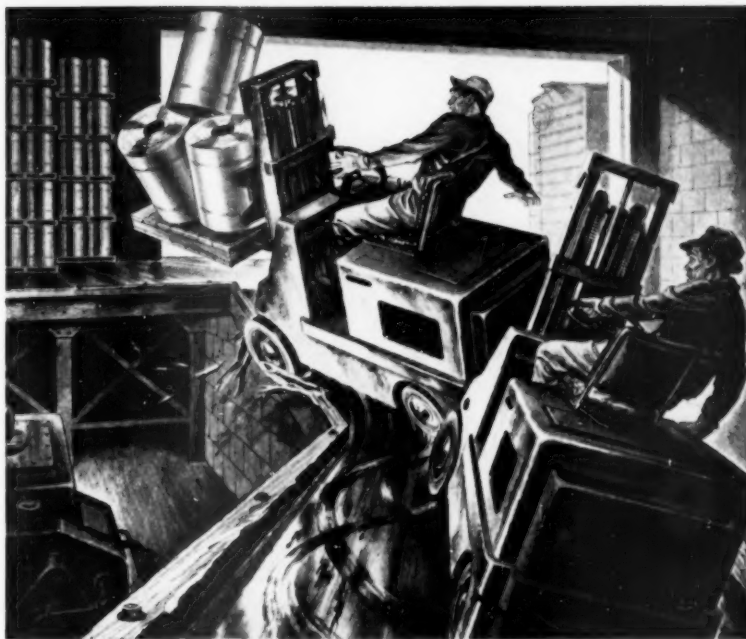
Fire Protection

—From page 46

thing is "radioactively contaminated" is not being sufficiently definitive and does not necessarily mean that we cannot have any contact with it. As a matter of fact, we have been living with radiation for a long time. Even before man existed, the radiation of cosmic rays was striking down upon the earth from the skies.

The radiation safety program of the Atomic Energy Commission has been very successful. The average radiation received by all workers at the Hanford and Oak Ridge plants is less than half the amount which residents of Rocky Mountain cities receive from cosmic rays. Radioactive elements, like radium in the earth itself, give off radiation. Many of the most popular mineral waters drunk by people in the United States are naturally radioactive. Your face gets more radiation when you get your teeth X-rayed than it would receive over a period of a year if you worked in one of the plants operated for the AEC.

During the entire period of operation of both the Manhattan District and the Commission there have been only two deaths due to



... THEN WE INSTALLED ALGRIP Thus Doubling Production Efficiency And Lowering Big Insurance Costs



In a large Eastern rolling mill, a ramp from the production floor to a storage area above was so slippery from oil and grease drippings that a fork-lift truck could not climb the incline by itself. An unloaded fork-lift truck had to push the loaded one. Already a safety hazard, the slippery ramp also caused production inefficiency.

INCREASED:
Production efficiency
by more than 50%
LOWERED:
Accident insurance
premiums to save
thousands of dollars.

When A.W. ALGRIP Abrasive Rolled Steel Floor Plate was installed on the ramp, skidding stopped, accidents were eliminated, and one truck did the job better than two did before. *Greater production efficiency and lowered insurance rates paid for the ALGRIP installation. Safe for vehicles as well as men, ALGRIP gives even steep inclines a hard-gripping, anti-skid surface.*

In ALGRIP, tough abrasive particles (the same as used in grinding wheels) put hundreds of tiny safety brakes in every footstep—making it virtually impossible to slip. ALGRIP never wears smooth—heavy use only exposes new abrasive particles. The tough rolled steel in ALGRIP makes this floor plate stronger than other abrasive floorings. For safety that pays for itself, get the complete ALGRIP story by writing today for our new Booklet AL-14—without obligation.

At your request, an Alan Wood Steel Company safety engineer will call on you to show you how ALGRIP can be profitably used in your plant to lower insurance rates, raise production, and eliminate accidents.

Over 125 Years of Iron and Steel Making Experience



ALGRIP Abrasive Rolled Steel Floor Plate
ALAN WOOD STEEL COMPANY

CONSHOHOCKEN, PA.

Other Products: A. W. SUPER DIAMOND Floor Plate • Plates • Sheet • Strip
(Alloy and Special Grades)





Saved!... Teaching good health habits and safety practices is the job of every Employers Mutuals Industrial Nurse. Employers who cooperate with these competent registered nurses have effected *worthwhile savings* in productive manpower—and, often, in insurance costs. Your organization can have this fine service—and many others—*without extra cost* when you qualify as one of our policyholder-owners!



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Employers Mutuals write: Workmen's Compensation Public Liability Automobile Group Health and Accident Burglary-Plate Glass-Fidelity Bonds and other casualty insurance. Fire-Extended Coverage-Inland Marine and allied lines. All policies are nonassessable.



EMPLOYERS MUTUAL LIABILITY INSURANCE COMPANY OF WISCONSIN
EMPLOYERS MUTUAL FIRE INSURANCE COMPANY

radiation. And although our overall safety experience compares very favorably with the average for all American industries, over one hundred accidental deaths, in which radiation was not a factor, occurred in the same ten year period.

The maximum allowable radiation exposure level used for the employee in our plants is extremely low because the man may be exposed day after day, year after year, for his entire working life. An individual who is exposed to radiation only on rare occasions—as, for example, in the emergency situation of fire fighting—can take as many as 500 times the daily level without any serious after effects. You might be subjected to 50 times the daily maximum permissible dose during certain types of fluoroscopic X-ray examinations.

The most popular use of radioactive material in industry and in medical diagnosis and treatment is in the form of radioactive isotopes, which are simply radioactive varieties of substances we are already familiar with, such as carbon, sulphur and iodine. The radioactive form of a material has exactly the same chemical properties as its non-radioactive form; this is an important point because it means that the fire characteristics of a chemical are the same regardless of whether it is radioactive or not. Radioactive carbon burns in precisely the same way as ordinary carbon.

Since the radioactive form of a material cannot be distinguished chemically from its non-radioactive form, it can be used to "tag" a material and to follow its routine chemical reactions. Radiation detection is much more sensitive than chemical detection.

The industrial uses of radioactive materials are interesting. Radioisotopes are used in mapping sewers and locating pipeline obstructions. They serve as boundary markers for successive shipments of oil in pipe lines. Radio-cobalt is utilized to X-ray thick castings and costs only a fraction of the radium formerly used; it can also function as a level gage to indicate the height of a liquid without the necessity of a mechanical connection. General

Aniline and Film is using radio-calcium to study synthetic detergents. Metal wear inside of motors can be studied without tearing down the engine, when bearing surfaces contain radioactive iron. The Bell Telephone Laboratories employ radiostrontium in searching for better preservatives for telephone poles and better methods for using such preservatives. A very sensitive and accurate type of thickness gage which does not damage materials is actuated by a radioactive source.

The medical applications are equally as intriguing. For example, saline solutions can be tagged and used to trace the flow of various fluids throughout the human body. Radioactivity may be encountered in radioactive isotopes, in shipments of materials, in processing plants and laboratories engaged in the atomic energy project and in nuclear reactors. Radiation varies in strength. One material may be highly radioactive and another only mildly so; in addition, the hazard also varies with the quantity of the material involved.

The AEC does not ship isotopes to a possible user until he has demonstrated that he has the necessary facilities, equipment and know-how to handle the material safely. This includes having qualified personnel on the scene. All shipments of radioactive material by common carrier have been made in accordance with Interstate Commerce Commission regulations.

Approximately 30,000 shipments of radioisotopes have been made from Oak Ridge to all parts of this country and 27 foreign countries. These radioisotopes have been produced, shipped and put to use by hundreds of workers in the isotope production and processing facilities at Oak Ridge, have been handled on railroads, motor-freight lines and air lines, in laboratories and in private institutions and industries—in safety and without a single reported radiation injury.

There are such facilities as reactor sites and certain chemical separation plants which are very "hot" radioactively and do present special problems; such installations are purposely situated re-

There's a Pyrene for every fire hazard



These extinguishers are for shipping room fire hazards: 1L to 8L Pyrene Cartridge-Operated, Anti-Freeze or Water Type; Pump Tank; and Soda-Acid Type.

40% of all businesses fold up when fire gets out of control

We're not trying to scare you, we only want to urge you to buy *enough* of the *right type* of extinguishers *in time* and have them *handy* wherever you have a fire hazard. Your local Pyrene* jobber has the right Pyrene equipment to cope with any fire hazard you may have—everything from hand extinguishers to automatic systems. He also carries Pyrene recharges. One call to him, one purchase order, one invoice will take care of any need you may have. Write us for his address.

*T.M., Reg. U.S. Pat. Off.

Portable fire extinguishers: vaporizing liquid, soda-acid, foam, cartridge-operated, carbon dioxide, dry chemical, and pump tanks • **Wheeled extinguishers:** soda-acid, foam, carbon dioxide, dry chemical types • **Air foam play pipes** • **Systems** for special hazards



PYRENE MANUFACTURING COMPANY
583 Belmont Ave. Newark 8, New Jersey

Affiliated with C-O-Two Fire Equipment Co.

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motely and are protected by private fire brigades which are especially trained. However, the majority of the facilities using radioactive isotopes or processing radioactive materials present so little radiation hazards that municipal fire departments may handle the situation without undue risk.

I recommend the following general precautions to be taken when fighting a fire involving radioactive materials:

1. Consult with and comply with the on-the-spot recommendations of the trained personnel associated with the project. Where any extra hazardous radioactive materials are being handled, such personnel will be available at all times.

2. Wear breathing apparatus on any serious fire. The self-contained type is preferable. Remember that we most frequently find these materials in chemical plants and laboratories where fortunately modern fire fighting practice now utilizes breathing apparatus as standard equipment.

3. Avoid unnecessarily disturbing or stirring up any materials and smashing laboratory glassware and apparatus. Fire fighting operations should be conducted as carefully as possible. The use of water should be minimized to prevent the washing away and running off of radioactive materials.

4. Avoid smoking, eating or drinking in the fire area. This will practically eliminate the possibility of swallowing radioactive material.

5. Avoid handling materials with the bare hands; if the presence of radioactive materials is suspected, use shovels or gloves.

6. Avoid remaining in the fire area any longer than necessary. However, remember that the fireman who is exposed to radiation on rare occasions can take many, many times the daily tolerance limit without ill effects.

7. Cooperate with the trained technicians at the scene in their application of whatever routine health and safety precautions they deem necessary.

8. Personnel who have operated at the fire should take a shower as soon as possible thereafter.

Please note that all of these precautions are by no means unique to the atomic energy field and would be just as appropriate in fighting a fire in a chemical plant. (Additional detailed information is contained in the International Association of Fire Chiefs booklet *Radiation Hazards of Radioactive Isotopes in Fire Emergencies*, in the preparation of which the AEC assisted.)

This review of the fire problems of atomic energy in peacetime might be summarized by the statement that radiation is not mys-

terious and is actually sufficiently understood to permit handling radioactive materials safely. The National Fire Protection Association has for a number of years had a Committee on Radiation which is concerning itself with radiation problems as they arise.

Let us now consider the atomic bomb. The high air burst is probably the most effective use of a bomb against a city, since it causes maximum destructive effects over the widest area. This is the type of burst we used at Hiroshima and Nagasaki. It will produce the most casualties, the greatest damage and the largest fires, but it will leave no radiation hazard. Those who are killed or injured by radiation from this type of burst will receive their injury in the seconds following the instant of the bomb burst.

The energy of an atomic explosion is released in three ways, namely nuclear radiation, blast and heat wave. The heat wave and the blast cause the tremendous physical destruction. In the Japanese attacks, only 5 to 15 per cent of all deaths were directly attributable to nuclear radiations. All of those killed by such radiation received their lethal dose within seconds after the bombs were detonated and in both cities there were no cases of damage to human beings from residual radioactivity.

Concerning the heat wave, its effects were definitely noticeable as far as two miles away or more. It caused flash charring and ignition of some materials and large numbers of personal injuries; it was also responsible for the patterns burned on buildings and people, since like all radiant heat, it was reflected by light materials and absorbed by dark.

All in all, the general pattern of fire destruction was that of complete destruction in an area about half a mile radially from ground zero and severe damage to an area somewhat over one mile from ground zero, with decreasing damage out to eight miles.

One of the important aspects of the atomic bomb attacks in Japan was that in the large areas which suffered simultaneous blast damage the fire departments were completely overwhelmed. It is true that the fire-fighting services

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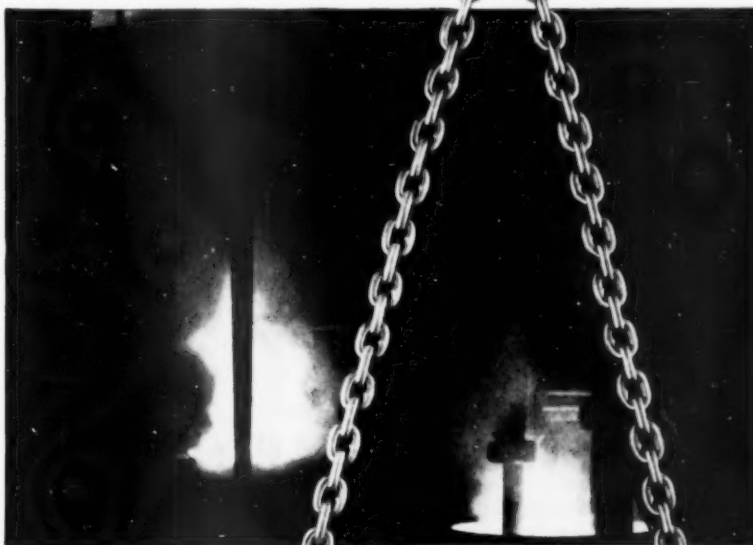
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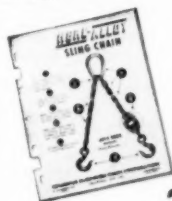
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and equipment were poor by American standards, but it is doubtful if much could have been achieved, under the circumstances, by more efficient fire departments.

From the viewpoint of defense we are confronted with many, many fires burning simultaneously over a large area regardless of whether the attack is a saturation raid with incendiaries or an atomic bomb explosion. (It is obvious that whereas relatively few planes are necessary to deliver an atomic weapon, a large air armada is necessary to carry out a saturation type incendiary raid.)

The problem that is presented as concerns plant protection is new only in the sense that so many of the fires start simultaneously. Actually, the basic principles of good modern fire protection engineering are equally as adaptable to wartime as they are to peacetime.

Fire protection engineering is divided into three elements, namely fire prevention, fire control and fire extinguishment. In peacetime industrial plant protection, fire prevention, which prevents the fires from starting, and fire extinguishment, which puts them out, are both very important; however, they are not as important as the factor of fire control.

This simply means designing the plant, and building in such fire protection that a fire which starts, as a result of a breakdown in fire prevention, cannot result in large scale or complete destruction of the plant. It is invariably a breakdown in fire control which makes possible large loss fires.

Good fire protection engineering is the proper approach to fire raids, whether atomic or incendiary. From the viewpoint of fire prevention there is nothing that the individual industrial plant can do to prevent the falling of incendiaries or burning brands from a conflagration initiated by an atomic attack; so, in a certain sense the factor of fire prevention does not apply.

Fire extinguishment does apply to the plant but with an important modification—much less dependence can be placed on the municipal fire department and much more must be placed on the plant fire brigade. It is always good policy to maintain close liaison

with the municipal fire chief. However, under air attack conditions the municipal fire department will have so many calls that it is impossible to handle them all; its fire-fighting efforts will be necessarily concentrated on attempting to check a raging conflagration or in attempting to protect a more vital industrial or military target.

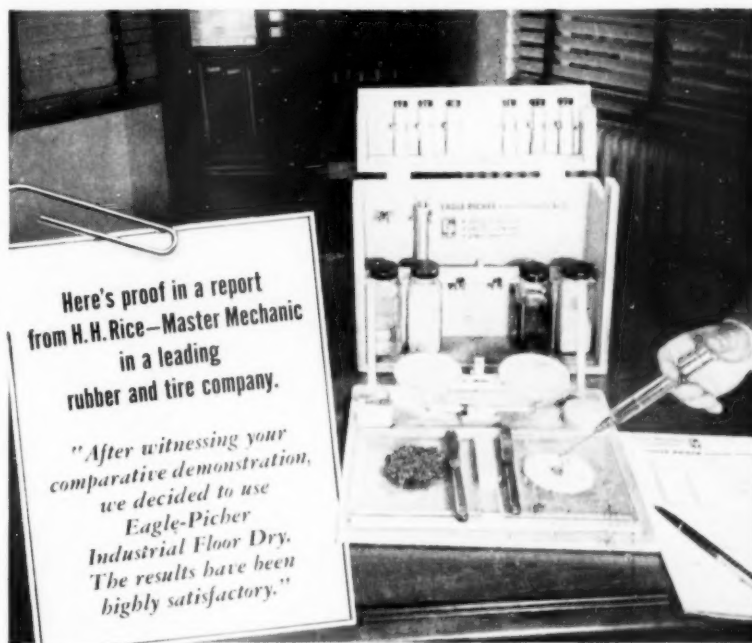
It is good practice in peacetime to have a plant fire protection organization. It is absolutely necessary to have one for wartime defense. The method of setting up a plant fire brigade is beyond the scope of this paper; however, the principles are thoroughly outlined in the splendid pamphlet, *Employee Organization for Fire Safety*, available from the National Fire Protection Association.

An extremely important contribution to fire extinguishment is the "fire guard" function. The air raid warden is generally concerned with the protection of personnel in his assigned area, for example, evacuating survivors, assisting the injured, rescuing those trapped. The auxiliary fireman performs his duty by standing by in the fire station and responding with municipal fire apparatus to the large scale fires. The fire guard is assigned to a specific area (and not to a fire station) and it is his function to extinguish the smaller fires so that the municipal fire unit need not be called.

In England, during the war, the fire guards repeatedly saved important plants at times when the regular fire fighting forces were busy elsewhere. In the larger industrial plant, fire guards would not necessarily be members of the plant fire brigade which would respond to the larger fires; they would remain in their own departments to handle the incipient fires. Employees must be trained to fight small fires. The more individuals who know how to use a pump tank, extinguishers or other small fire fighting equipment the better. None of the effort expended in training people in the first aid fire fighting is wasted since it is useful in peacetime.

Water remains the only effective tool for fighting large fires. It is true that many sources of water supply, such as a municipal grid-

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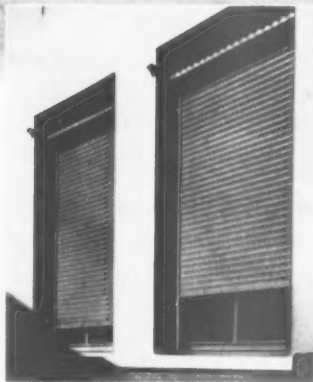
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iron system, may be disrupted in whole or in part by an airborne attack and cannot be blindly depended upon. However, a goal of good modern industrial fire protection is that a plant have available on its property or in the immediate vicinity a sufficient quantity of water to handle the largest fire that can be anticipated without depending on water mains coming in from a distance. This is a sound objective because water supply is occasionally shut off even during peacetime. The important point is that if this policy is followed for peacetime, the water is available at the plant in wartime, regardless of what happens to the outside water mains. Fire insurance companies or local rating bureaus can assist in determining the amount of water necessary and how it may best be stored.

Considering fire control, buildings of fire-resistive construction — reinforced concrete or protected steel frame — will offer maximum resistance. Plant management should utilize all of the standard fire control devices. Fire-resistive construction should be the goal, especially in new construction. Large fire areas representing an unreasonable fire risk should be reduced by standard fire walls. Wider use should be made of automatic sprinkler protection and existing sprinklers should be properly maintained. Full utilization should be made of fire detection and alarms systems and all other standard protection practices, such as water curtains to protect against exposures. Protection of records warrants special consideration.

Automatic sprinkler systems can generally be expected to give a good account of themselves, especially if a gravity tank provides the primary supply and is augmented by a reliable secondary supply such as pump suction tanks from which water may be taken by a gasoline or diesel-powered fire pump. A standard gravity tank is designed to resist tremendous wind loads and is probably no more susceptible to blast damage than the building it protects.

It is obvious, I believe, that there would be no point in attempting complete protection against the possibility of a plant being within the area of complete

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destruction. However, considering the industrial plant which is located within a congested area easily recognizable as a target, the probability of being in the area of partial damage is far higher than that of being in the area of total damage. Consequently, such a plant should bring its fire protection up to high standards.

Of course, it is in new construction that maximum fire protection can be achieved through careful selection of plant location and good fire protection engineering. The use of space, which is fundamental in fire protection, is also the most important defense measure against the weapons of modern war.

One of the initial publications on the subject of civil defense planning by the National Security Resources Board was entitled *National Security Factors in Plant Location*. It said in effect that concentration of industry in the future must be avoided. It did not suggest that existing plants be uprooted and moved. It did point out that, in the normal course of things, industry would be planning new buildings and new plants. It recommended that whenever a new building was to be built, it be built with a space separation from existing plant structures. When extensive plant enlargements were considered, it asked management to study the possibility of locating the new facilities away from existing congested industrial areas.

To summarize, the best defense against the wartime fire problem for the individual plant is to make the plant as independent as possible from the fire protection viewpoint and this can be done by bringing the plant's peacetime fire defenses up to the highest standards of modern fire protection engineering. It is management's responsibility to see to it that this is done. If plant fire protection is brought to the proper level because of wartime fire considerations it will pay measurable dividends year in and year out in peacetime.

For further study of this important problem, there is available from the National Fire Protection Association a new publication entitled *A First Book on Fire Safety in the Atomic Age*, by Horatio Bond, Chief Engineer, NFPA.

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**PROFIT
and
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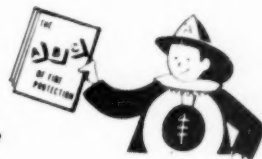
Fire scenes like that shown here are repeated scores of times daily throughout the country. Newspapers referred to this one as a "half million dollar blaze." But, they were only talking about the building and its contents. They didn't refer to losses in terms of out-of-service time, lost customers, inflated costs of rebuilding, destroyed records, vanishing profits. No, those losses are intangible—yet, just as real, just as eminent as the physical cost of fire destruction.

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Emotional Safety Valves

From page 12

no impression on them either. So I asked for their remedy and they had a ready one. They thought a tough attitude is all that workers ever understand. They would not agree with my view that that game has been tried out long enough and is responsible for the present mess. In forceful words they narrated the story of a nearby management who had the courage to close their factory for six months to compel workers to accept their terms.

I wondered what the profit and loss account of that strike had been. I wondered if any thought was given to the fact that the strike not only brought starvation to workers, but also to the industry and the nation, and that in no way did it herald a single sign of plenty in future, or that it did not in the least lessen the chances of another need of such a starvation for settling disputes. I wondered if the difference between a sullen and happy worker was appreciated.

I, however, did not share these thoughts with them. I realized that they were in no frame of mind to accept the fact that reason and logic alone never suffice in man's dealing with man. Emotions have also to be accounted for.

So I left them, and they felt happy that they had the last word. To cash in on their victory they took the first opportunity to approach management with the suggestion that expenses of safety measures emanating from the Department of Industrial Health and adopted in their department be charged to the former as such expenses unnecessarily raised their costs of production.

Another department head, however, had a different story to tell.

"Good morning, doc," he said. "Do you remember the suggestion the safety committee made a few months ago? But my men were not happy with it. So I gave more thought and I had another idea. This may cost a little less, even help my production and the men like it."

Evidently, this officer believes in making his men happy and has

found out that safety and production go hand in hand. He incidentally also succeeds in convincing his men that they count in his calculations of production. He also believes in getting tough with them on occasions. I have seen him so at times. But some how his men allow him this privilege with grace. He says he is lucky. His problems of go-slow tactics and similar other headaches are not half as many as those of others.

Leader or boss? Looking at this picture and that, I saw the difference between the two. The leader sees wisdom in humility, and in a rising status a better opportunity to serve; therefore, he gathers prestige. He is generally so busy mending his own defects and tending his own failures that he has no inclination to bother about other people's defects and failures. With every rung of the ladder he climbs, he broadens his outlook and vision and finds an increasing amount to learn. While learning he incidentally trains his men into happier and more productive methods of work, secures their co-operation and produces results.

The boss is self-satisfied and assumes that power is knowledge. Lacking in the warm sympathies, the creed of service does not attract him and he is generally pre-occupied with false notions of his own status and therefore loses prestige. This tempts him to hanker all the more after prestige, and not getting any, he starts fault-finding with others for his failures and does not care to search within himself for his own shortcomings.

The higher he rises, the less need he feels for learning and so has fewer and fewer new ideas to impart to his men. He works through orders and demands obedience to them. When he does not get it, he goes tough and tougher and creates conflicts.

Now-a-days one hears no end of management-labour disputes, but one has said all that can be said about their solution, when one says that the solution is to convert the boss into a leader, and the leader into a greater leader. This is easier said than done.

* * *

A third departmental head

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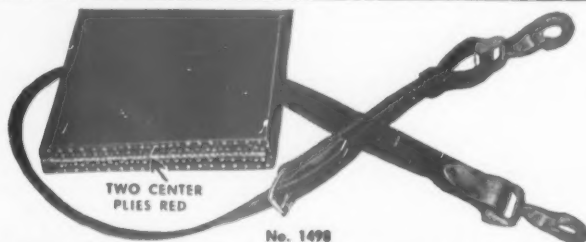
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poured out his woes to me this way.

"Following your advice has landed me into a fine mess. You have been telling me that misunderstandings are responsible for workers' unreasonable attitudes and they can be avoided if we tell workers the why, what and how of any changes we may want to introduce. Management wants rationalization.

"I took the trouble to explain to them individually and collectively the what and why of this scheme and I assured them that though it will lead to retrenchment, no one will be discharged, but some will have to be transferred to other departments. They seemed to be satisfied when talking with me, but if you please, they have gone and actually adopted a go-slow policy. I am sure if I had not talked to them this way I would not have had to face such a problem."

I saw his difficulty. Man, besides each one having his own individuality, is a social animal. Management is up against a tough problem trying within a robot system of mass production to respect and develop the individuality of each one among their personnel, but to insult his herd instinct is to invite a greater trouble. This supervisor was out to disturb the solidarity of informal groups that always exist in work-rooms, and such groups exist because workers develop in themselves a sense of security through belonging to a group of their own choice.

A worker dreads nothing more than being separated from his group. The new type of leader tries to keep himself well-informed of all such groups within his sphere of control, and if transfers become necessary he will transfer the whole group and never try to break it up. He would go further. If perchance he has introduced in a group of happy solidarity an unwelcome worker, he would do all he can to make him acceptable to the group. Failing that he would separate him from the group.

This officer needed knowledge of group psychology. But to try to explain it to him in a few minutes' talk would make confusion more confounded. Nor did I feel

competent to make such an attempt. A regular course in training for leadership alone can drive home the fundamentals of this subject.

But the snag here is the top executive. Such training to be useful has to flow from top downwards. I took such a training during my last study-tour in England, and the consensus which came out through informal conversations between pupils and teachers was that such training though useful for every grade of supervision was most necessary for managers and managing directors. * * *

The third and final installment of this article will appear in an early issue.

Controlling Heat Exposure

—From page 35

should be insulated to prevent re-radiation of heat.

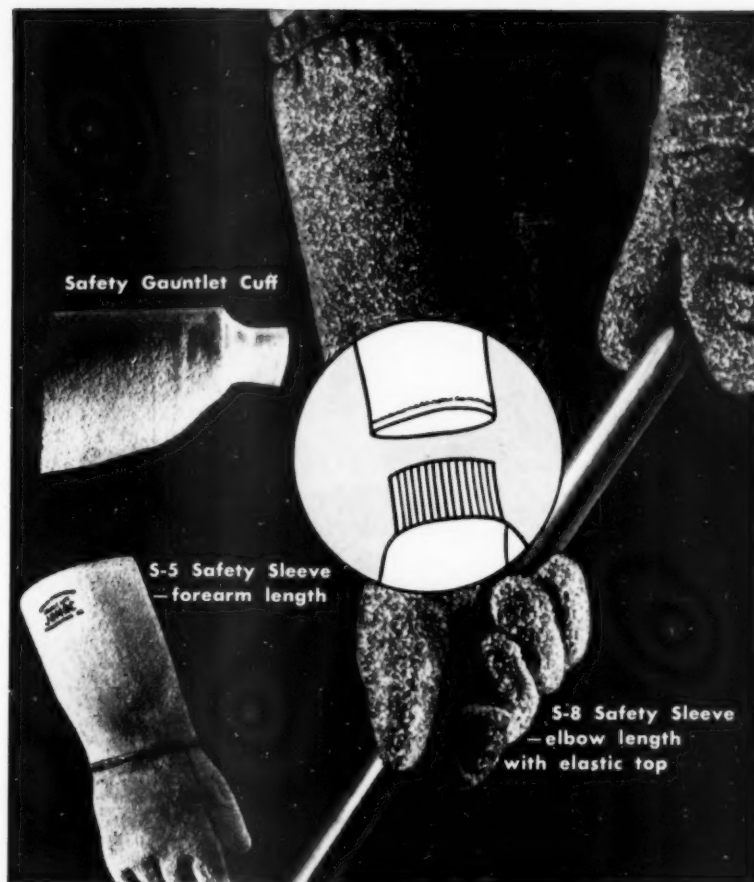
Supplying air to the work place instead of exhausting it may be more effective under some conditions. The air may be taken directly from outdoors and it may be cooled and dehumidified by water sprays. Piping should be insulated to avoid heating incoming air.

The cooling effect of evaporation is well known. In some industries this is accomplished by water sprays on the factory roofs which lower the temperature inside noticeably. These methods will provide welcome relief where complete air conditioning is not practical.

Large fans, known as "man coolers" are used in many operations, such as wire drawing, glass manufacturing, etc. These are set up in the vicinity of hot operations to direct the stream of air at the workers. Streams of cooler air directed downward from overhead ducts are also employed.

Vapors and excess heat created by machines, furnaces, tanks, kettles, and other equipment may create a definite health hazard which may require an exhaust system. Such a system is particularly important where steam vapors form a fog which interferes with lighting, visibility and safety.

A serious problem of temperature control is in crane cabs. The



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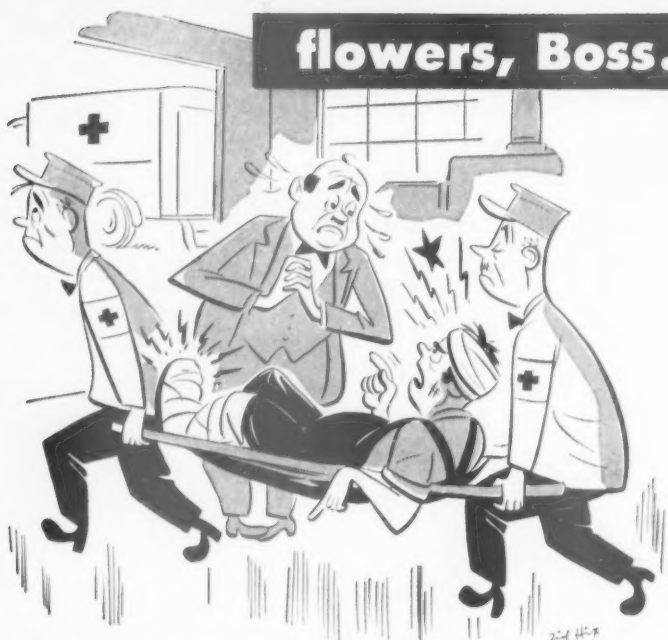
Why buy expensive gauntlet gloves? Jomac® Safety Sleeves mean better forearm and wrist protection against burns, cuts and lacerations, outwear many pairs of gauntlet gloves, are washable. Write for new illustrated catalog of Jomac Products.



C. WALKER JONES CO., PHILA. 38, PA.

"Don't send me

flowers, Boss..



**"Just put some Anti-Slip Cosmolite
on those slippery floors!"**



**WRITE FOR
FREE BOOKLET**

NOW you can "cure" those slippery floor problems without special products or costly extra labor. New Anti-Slip Cosmolite does the job in jig time. Protects against floor damage as well as accidents. It's applied quickly like an ordinary self-shining wax. Dries bright and stays that way. Eliminates unnecessary buffing. Resists water spotting. Try it now. Sample sent to you on request.

Anti-Slip Cosmolite Wax

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HUNTINGTON LABORATORIES, INC.

Huntington, Indiana • Toronto, Canada

Put your firm name or safety slogan on America's most practical **BALL PEN**



Press the button to write and the clip to retract.

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Quantity	100	250	500	1000	2500	5000	10000
Each	.72	.70	.68	.61	.59	.54 1/2	.50

The above prices cover from 1 - 4 lines of imprint.
Call in your local Advertising Jobber or Agency to see samples.

For complete catalogue write to

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309-11 Fifth Avenue, New York 16, N. Y.

ATT: Mr. A. Aachen—Premium Dept.

operator is often exposed to gases, vapors and dust as well as to high temperatures resulting from climatic conditions and heat generated by industrial processes. Air conditioned cabs have been installed in some industries, with great improvement in comfort and safety for the operator. Locomotive cranes which often operate outdoors under the hot sun can also be equipped with air conditioning apparatus.

Radiant heat is a serious problem in some operations, such as furnaces, kilns, foundries, rolling mills, cupolas, glass and brick making, etc.

Dark objects are usually better absorbers and radiators of heat. By polishing the surface, its reflecting powers are increased and its absorbing power is diminished.

Radiant heat is similar to light. It can be absorbed, reflected, and transmitted in a straight line. Gases permit passage of radiant heat with little rise in temperature, while such material as iron, wood and paper absorb most of the heat radiated to them and thus serve to shield heat sources.

Radiant heat may be controlled by one or more of several measures. Sometimes isolation of the entire process is practicable. In other operations, the main source of heat may be insulated or water jacketed. Fire chains in front of open furnaces and stationary or moveable screens also protect the workers from intense radiant heat. The most effective control in almost all cases is a bright aluminum reflective screen.

Protective clothing also plays an important part in protection against radiant heat. Face shields and masks with filter lenses are essential in some operations. Reflective clothing and gloves are very helpful in many operations.

Resistance of the individual to the effects of heat is also affected by personal hygiene. Good habits can be encouraged through posters, articles in the employee publication, and through personal contacts with the medical department.

Adequate intake of drinking water and salt should be stressed. Salt dispensers adjacent to drinking fountains are found in most plants.

In addition to the sodium chloride tablets, other types are available. Tablets which combine salt and dextrose are more palatable and less likely to cause distress to some stomachs. Impregnated tablets which disintegrate slowly and enteric coated ones which pass through the stomach unchanged and dissolve in the intestines are also available.

Addition of salt to the plant drinking water supply has been used in some plants. This should be done under medical supervision and it should be remembered that a salt content in the drinking water must be kept at 0.9%.

Medical supervision becomes increasingly important when men must work under high temperatures. Men who are on salt-restricted diets should not be employed on heavy manual labor and the combination of excessive heat and physical exertion may be dangerous for defective hearts.

Portrait of a Grade Crossing Victim

A SURVEY released today by the Baltimore and Ohio Railroad gives this picture of the "average" motorist who becomes involved in a grade crossing accident:

He is a male driver operating a seven-year-old sedan of one of the popular priced automobile lines. He is usually alone in the car. Very often he lives within 20 miles of the intersection where the accident occurs.

In one out of five cases he drives into the side of a train after the locomotive has already started through the crossing—the car hits the train instead of the train hitting the car.

These were among the findings of a study conducted by the B&O of its 1952 crossing accidents, one of a number of surveys the railroad has carried out in its accident prevention campaign.

Various forms of reckless or negligent driving accounted for 39 per cent of the accidents. The remaining 11 per cent were attributed to miscellaneous causes, including weather factors resulting in poor visibility and slippery road conditions.

THE JACKSON New Lift-Front Helmet See it...Try it

- * Plastic Lens Holder
- * Improved Helmet Shell
- * Improved Headgear

* **Lens Holder** has hinged front, holding welding lens and cover glass. It permits inspection of work without raising the entire helmet—a great advantage, especially for work in close quarters. Made of high-impact, compression molded, thermosetting plastic, it is strong and durable. Coil springs are built inside the hinges to hold front up or down. Another clear glass is held in aluminum inner retainer and stays in fixed position to keep out flying particles. All glasses are replaceable without tools.



ARC WELDING HELMET H-2
with Lift-Front Type

ON BOTH JACKSON HELMETS . . .

* **One-Piece Helmet Shell** is now made of a thermosetting plastic, reinforced with glass fiber, combining all the advantages of resistance to heat, moisture, high voltage and spatter with even greater strength, and even better appearance than before.

* **Headgear** has wider and more flexible straps for greater comfort, made of smooth plastic, easy to clean. There's no trial-and-error adjusting it to size. Calibrated to hat sizes in 1/8-inch increments,

it is quickly made to fit before putting it on. The cork padded sweatband, held by snap buttons, is inexpensive to replace.

Try on either Helmet. You, like other weldors, will particularly like the Jackson-developed friction pivots. They are easily adjusted to your needs, by hand, from the outside, without taking the helmet off. The helmet can thus be made to float down without jolting stops, or to stay in any desired position. This unique feature eliminates the need for chin straps and other cumbersome inside gadgets.



Cover glass slides out without disturbing the filter lens
... Plastic shell swings up on adjustable friction pivots.

Now—Lighter than Ever!

Jackson's stationary-front helmet, the first with a one-piece thermosetting plastic shell, is now, with its new, light metal lens holder, being made lighter than before.

With its new shell and improved headgear, it will win friends among weldors everywhere.

ARC WELDING HELMET H-1
with Stationary Front.....Type

Sold world-wide through distributors and dealers. Jackson Products, foremost makers of arc welding electrode holders, ground clamps and cable fittings, also manufactures a line of gas welding goggles, grinders' goggles, eye and face shields.

JACKSON
PRODUCTS
WARREN • MICHIGAN

Weatherite
BAKED ENAMEL

SIGNS

STANDARD REGULATION
SIGNS OF ALL KINDS FOR
SAFETY AND EFFICIENCY

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PRAIRIE STATE PRODUCTS CO. 3822 LAWRENCE AVE.
CHICAGO 25, ILL.
EST. 1930

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OR

SCRUB



**WITH THIS ONE
HILD MACHINE**

Scrape off hard-caked grease and dirt...scrub away dangerously slippery oil with this one powerful HILD Floor Machine! With Power-Scraper attachment the Hild Machine breaks up packed grease deposits...saves hours of tedious chipping away with a hand-spud. No danger of marring the surface or of loosening wood blocks. To remove oil film or slippery grease, use the HILD Machine

as a Shower-feed Scrubber. It's equally speedy and thorough in open areas and in the "danger spots"...around, beneath and between machines. Use the same versatile Hild Machine for office floors also...to wax, polish, buff, sand, grind or steel-wood floors of all kinds. Six models with brush spreads from 11 to 19 inches.



**Only HILD has the
Shower-feed Brush**

Diagram shows how cleaning solution flows from tank on handle through accurately spaced holes penetrating brush back between each row of bristles...for thorough scrubbing with utmost economy

Ask for
**FREE
Demonstration**

Write for
**FREE
CIRCULAR**



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ALLEN SANI-SPRAY STATION

For Cleaning and Fog-proofing Glasses and Goggles

- ✓ Self-contained
- ✓ No air pressure
- ✓ No attachments
- ✓ Compact size
- ✓ One stop—one application
- ✓ Hang up ready to use



- ✓ Holds dispenser of Sani-Spray and 400 tissues plus receptacle for used tissues
- ✓ Lock and key for tamper-proof
- ✓ Heavy gauge steel with baked enamel finish

ALLEN OPTICAL COMPANY

**85 ALLEN STREET
BUFFALO 2, N. Y.**

Calendar Contest Winners For March

First prize in the National Safety Council's Safety Calendar Contest goes this month to J. F. Simmons, Concentrator Foreman, Noranda Mines, Ltd., Noranda, Quebec. The theme in this contest was ask and learn. Mr. Simmons' line was adjudged the best of all those submitted. It was:

Teen, green and machine do not pay.

Second prize went to Mrs. Madelon Boydle, Buckeye Steel Castings Co., Columbus, Ohio, for this line:

Don't YOU learn this KIDIOT way!

Third prize was awarded to Edward Frimmer, Group Supervisor, E. I. DuPont, Newark, N. J., for the following line:

Drill for skill—the "co-pilot" way!

The limerick for March was:

Learn a lesson from teen-ager Ray

Who smashed up dad's car just today.

Tried to drive the machine

When he still was too green

Thirty \$5 awards were issued to:

Helen L. Keeler, Wabash Railroad, Decatur, Ill.

Mrs. James C. Sheehan, Mine Safety Appliances Co., Nashville, Tenn.

Mrs. Ernest M. Grider, Allison Division, General Motors Corp., Indianapolis, Ind.

Miss Agnes C. Lomax, Fall River, Mass. (Individual Member)

Melvin Weaver, Lieutenant of Police, City of Philadelphia, Philadelphia, Pa.

Mrs. Fred Gerhard, American Airlines, Inc., Knoxville, Tenn.

John Haliburton, Jr., Pumper, Arkansas Fuel Oil Co., Shreveport, La.

B. C. Sibley, Recorder, Tennessee Coal & Iron Co., Birmingham, Ala.

C. W. Schulmeyer, Engineer, Honan-Crane, Lebanon, Ind.

Harold L. Smith, Chemical Engineer, Bakelite Corp., Bound Brook, N. J.

Mrs. Ruth Zimmerman, Aluminum Co. of America, Cressona, Pa.

Mrs. Emma B. Wood, Richmond, Fredericksburg and Potomac Railroad, Richmond, Va.

Mrs. Betty M. Davis, Rosemead, Cal. (Individual Member)

Mr. Richard Rondi, Plant Purchasing Agent, Frankfort Distilleries, Inc., Louisville, Ky.

Mrs. Ben Dibrell, Oklahoma Gas & Electric Co., Ardmore, Okla.

Helen L. Altimus, Stenographer, Rochester & Pittsburgh Coal Co., Indiana, Pa.

L. C. Lester, Power Plant Operator, St. Regis Paper Company, Kalamazoo, Mich.

Mrs. Ben C. Goddard, B. F. Goodrich Co., Akron, Ohio.

Max Levin, Postal Clerk, U. S. Post Office, Milwaukee, Wis.

Mrs. Daniel J. Homan, Water De-

partment, Municipal Building, Denver, Colo.

Mrs. Margaret Speltz, Minnesota Mining & Manufacturing Co., St. Paul, Minn.

Randolph Harrison, Bookkeeper, B. B. Chemical Co., South Middleton, Mass.
Gloria Rossi, Draftsman, Sperry Gyroscope, Great Neck, N. Y.

Francis J. Spurrier, Crown Cork & Seal, Baltimore, Md.

Miss Elsie Rossmann, Pittsburgh, Pa. (U. S. Government)

Mrs. Jeanette Fairchild, Montreal Mining Co., Montreal, Wis.

Francis O. Hatler, General Clerk, Great Northern Railway, Great Falls, Mont.

Louise Surgison, Secretary, West Penn Power Co., Pittsburgh, Pa.

June Simser, Cost and Statistical Department, The Steel Company of Canada, Ltd., Hamilton, Ontario, Canada.

John H. Wiese, Alpha Portland Cement Co., Peru, Ill.

Los Angeles Harbor Makes New Safety Record

A year's operation without an accidental death, a major fire, or a collision of ocean vessels was the proud record of the Los Angeles Harbor during 1952.

In announcing the 1952 safety record, Admiral Frank D. Higbee, Port Warden and Vice President of Maritime Safety for the Greater Los Angeles Chapter of the National Safety Council, said the Los Angeles Harbor had the lowest injury rate of any port on the Pacific Coast. Only 39.1 injuries occurred for each one million man-hours worked.

At the same time, Higbee said, more than 24-million tons of cargo were handled from 5,393 ocean vessels and more than 1,200 tankers were loaded and unloaded without loss of life, with no major fires, and with minimum spillage.

Maritime Underwriters, he said, consider longshoremen working at the Los Angeles Harbor as the safest port workers in the world. Premium rates for disability insurance at the Harbor are approximately \$5.40 per \$100 payroll, compared to more than \$13.00 per \$100 at some ports.

The 30 fishing vessels lost off the California Coast during 1952, Admiral Higbee said, were either lost at sea or in other ports.

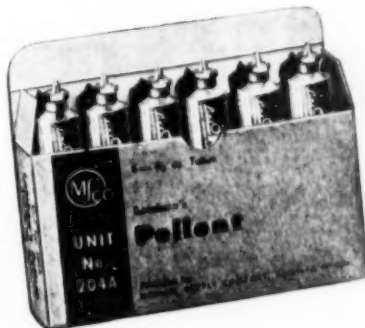
The Los Angeles Harbor Department's 1952 record was the finest on the Pacific Coast and the best since the Department started keeping detailed accident records.

National Safety News, May, 1953

MSCo PELLENT...

NO MORE MOSQUITO BITES

No more lost time fighting mosquitoes, flies, chiggers, etc. . . no more swatting around in dangerous quarters . . . no more itching welts to distract workers. An application of Pellent lasts at least *six hours* . . . costs less than 2¢. In handy *cream* form . . . no stickiness . . . doesn't come off easily with perspiration. Packaged exclusively by MSCo under the Unit System to fit all standard unit type first aid kits. Six non-leaking tubes per Unit. Write for descriptive folder.



Medical Supply Company

"It pays to buy from Medical Supply"

ROCKFORD, ILLINOIS • IN CANADA, IT'S SAFETY SUPPLY CO.

YOU CUT COSTS with GOLD MEDAL MIDGET Safety Swinging Scaffolds



LIGHT! — One man can carry a Midget winch and stirrup.

A midget in size...a giant in safety, the GOLD MEDAL "Midget" scaffold is a handy time and labor saver.

- **SAFE!**—Steel wire rope assures extra strength. Positive 3-way lock prevents slipping or running down.
- **EASY TO INSTALL!**—No time lost tying or untying dangerous hitches; uncoiling ropes.
- **EASY TO OPERATE!**—Pinion gear for fast raising—worm gear for smooth lowering.

A Complete Nation-Wide Scaffolding Service — based on seventy years experience in designing, making and supplying off-the-ground safety equipment for the building trades assures you:

WHAT YOU NEED WHERE YOU NEED IT WHEN YOU NEED IT



for Greater Safety . . . Efficiency . . . Economy

THE PATENT SCAFFOLDING CO., Inc.

DEPT. NSN, 38-21 TWELFTH ST., LONG ISLAND CITY 1, N. Y.
WEST COAST PLANT, 6931 STANFORD AVENUE, LOS ANGELES
See Your Classified Telephone Directory for Nearest Office

Tramp Iron Plagues Paper Industry

NEARLY \$2,400,000 in machinery damage was suffered last year in paper mills because of nails, spikes and other insignificant bits of metal! One out of every two mills was shut down!

Damage to processing equipment reached almost \$400,000 in 178 paper mills—the number answering the recently conducted

survey directed to 918 mills. An average of \$2,227 was lost in machinery breakdown and downtime in each mill, of which there are 1071 in the country, totalling \$2,400,000 damage. The survey was conducted by the American Pulp and Paper Mill Superintendents' Association and the Eriez Manufacturing Company, Erie, Pa., to determine tramp iron problems in paper mills. Damage to equipment totaled \$396,625 year-

ly. A typical collection of tramp iron causing damage consisted of wedges, spikes, nails, and bottle caps. One box board mill actually removed a Ford engine block from its beater.

About 29 per cent of all tramp iron damage is a result of repairs and replacement of parts in beaters, pulpers, and refiners.

Since the development of Alnico, a ferrous alloy of aluminum, nickel and cobalt which holds its magnetic strength indefinitely, more than two-thirds of all magnetic separator installations in the paper industry incorporate permanent (non-electric) magnets. These magnetic separators can be tailored to fit specific applications. They do not need motor generator sets or rectifiers, electrical wiring, require no outside source of power to energize, and do not weaken or burn out when subject to wet conditions in the paper industry.

Basically, magnetic separators can be divided into four specific categories: (1) Magnetic pulleys—automatically separate ferrous contamination from non-magnetic materials such as wood chips and coal conveyed on belts. They work effectively with belts of rubber, canvas or other non-magnetic materials; (2) Magnetic drums—can be installed in any conveying system not using belts and operate efficiently whether handling wet or dry materials; (3) Plate-type magnets—are frequently submerged in the slurry and remove tramp iron under water without loss of magnetic strength for indefinite periods; (4) Magnetic humps or traps—when properly installed, virtually eliminate tramp iron damage to pumps, jordan and refiners.

Home Away from Home

—From page 31

floor and still running. The officer opened the window a little at the top and bottom, then the two of them made a tent out of the drenched carpet, pulled it over their heads, and sat by the window with their noses at the lower window opening. They were still at the window four hours later when firemen broke into the room, and they were still alive.

The motel or auto court pre-

WHY CURE?.. PREVENT!

DON'T LOSE MAN HOURS
due to
POISON OAK, POISON IVY,
or
POISON SUMAC

A SUPERIOR PREVENTIVE
(When applied before exposure)

Many of the country's largest public utilities rely on B-Y's Medicated Ointment as a superior preventive. Extensive field tests by Safety Engineers have resulted in overwhelming acceptance.

A TRUSTWORTHY ALLEVIATIVE

In the event you forget to prevent, here is a trustworthy alleviative. No first aid kit is complete without B-Y's Medicated Ointment. Available in 3 size tubes, 3 oz., 1 1/2 oz., 1/2 oz., and in double, and single unit packs for first aid kits.

Some of Our Users

General Services Administration, U.S. Forest Service, Region 5, California State Division of Forestry, Southern California Edison Co., Pacific Telephone and Telegraph Co., Los Angeles, Associated Telephone Co., Santa Monica, Southwestern Associated Telephone Co., California State Division of Highways, Los Angeles Department of Water and Power, California-Oregon Power and Light Co., Puget Sound Power and Light Co., City of Tacoma Light Department, San Diego Gas and Electric Co., State of Rhode Island Forest and Parks.

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B-Y's MEDICATED OINTMENT
FOR
POISON OAK - POISON IVY
POISON SUMAC

B-Y's OF CALIFORNIA, 3010 W 7TH ST, LOS ANGELES, CALIF.



Saves Up to 40% on Sling Costs



"Tuffy Slings Are Easy To Work With"

Says Superintendent of a
Missouri Construction Company
(Name on Request)

Only Tuffy Slings give you the patented 9 part machine-braided wire fabric construction that resists knots and kinks . . . stands up longer than ordinary wire rope. Tuffy Slings can be repeatedly bent around small radii and abrupt corners. You'll find Tuffy Slings are extra flexible, extra strong — they're proof tested to twice the safe working load. Try Tuffy yourself and see the difference!

Write For
FREE Sling Handbook
Mail Coupon Today!



UNION WIRE ROPE CORP.

Specialists in Wire Rope and
Braided Wire Fabric

Manchester Ave., Kansas City 3, Mo.

Please send me the FREE Tuffy Sling Handbook and Rigger's Manual.

Firm Name _____

By _____ Title _____

Address _____

City _____ Zone _____ State _____

sents a different problem. They differ in accommodations and service depending upon the management or ownership. We will find the best and worst of them in the same town or a few blocks apart. There may be times when we have no choice. I remember we waited too long one day and ended up sleeping in a tent!

Some of the modern motels offer the finest of accommodations, including complete cooking and housekeeping equipment. They go so far as sanitary sealing of the bathroom equipment with tapes so that we may know that we are the first users of this equipment since it was last cleaned.

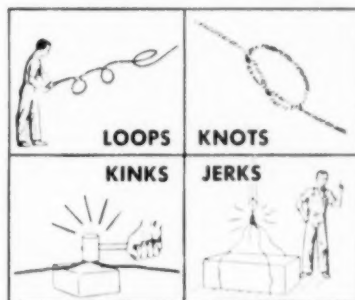
In direct contrast is the old chicken coop or woodshed type motel poorly equipped with cast-off furniture and rebuilt equipment. The heating plant may be a space heater of the kerosene type with no outside ventilation.

Last summer some friends of ours visited Yellowstone Park. They stayed at one of the cabins in the park. The heating plant was a wood burning stove, a pail of wood shavings with a large spoon standing next to the stove. One of the men in the party started a fire by heaping six or eight spoonfuls of shavings into the stove. When they lit the fire they really had a roaring fire and for a time they thought the place would burn down. Later they saw the instructions on the wall which informed them that the shavings were soaked in kerosene and the instructions were to use one large spoonful of shavings in starting the fire.

To secure good accommodations for the night at a good motel we should start looking no later than 4:00 p.m. Advance reservations can be made where there are chains or cooperative organizations. Again, upon arrival, we should make a complete inspection of the place. If there is a heater (in some parts of the country gas heaters are used) we should find out how to operate it properly. Have the owner or attendant turn it on and off to see if it works. We should look over the outside of the place in daylight to find if there are any drains, ditches or even streams close by. These conditions may



PREVENTS DAMAGE! When These Stresses Happen To Slings



Only Tuffy gives you the 9 part machine-braided wire fabric construction that fights off knots and kinks . . . stands up longer if such stresses occur. These extra Tuffy advantages assure longer sling service that can help you save up to 40% on sling costs!

Free 3' Sling Sample!

Knot it—kink it if you can—put it to the test. See how easily Tuffy straightens out—without damage!

Free Sling Handbook!

New! Complete! Only handbook of its kind. Factual, useful data, graphically illustrated to help you cut sling costs.

Get Your **FREE**
Sling Handbook

Contains plenty of
factual, useful data
on 12 braided sling
types. The only
handbook of its kind,
and it's yours for
the asking!



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☐ Send FREE Tuffy Sling Handbook and Rigger's Manual.

☐ Have my Union Wire Rope Fieldman bring my free sample of Tuffy Sling.

Firm Name _____

Address _____

City _____ Zone _____ State _____



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WITH BROWN NEOPRENE
"CORK-GRIP" SOLES
STITCHED WITH
DACRON®

Sizes 5 to 14
Widths B to EE

Original!
Aerotred Cushioned
KNAPP
SAF-TEST
SAFETY SHOES

For full information write W. M. Partridge, Jr.,
Saf-Test Dept., Knapp Brothers Shoe Mfg. Corp.,
Brockton 61, Massachusetts

KNAPP SAF-TEST FEATURES

1. Original Aerotred Cushioned Innersole
2. Positive Longitudinal and Metatarsal Arch Support
3. Specially Designed Tempered Steel Shank — Extra Wide — Extra Thick
4. Smooth Comfortable Non-fraying Genuine Leather Toe Lining
5. Uppers Stitched with NYLON for Extra Durability
6. Soles Stitched with DACRON® that Resists Chemicals, Solvents and Caustics
7. 100% Union Made
8. Guaranteed Superior Knapp Quality and Workmanship

*DuPont Trade-Mark

present real hazards when we venture outdoors after dark.

The cottage at the shore or in the country, which we may own or rent for the summer, presents another problem. When we start out in the spring to get the place set up for summer, we should give serious consideration to leaving the small children and the very old people at home.

The family car should not be so full of equipment that our vision is blocked out of the side or rear windows. The top of the car should not be piled so high as to make it top-heavy. Remember some of the states do not permit cars on parkways with anything strapped or tied to the sides or top of the car.

The cottage should be aired out by opening all the windows. Inspect the place to see if any small animals have set up house for the winter. Inspect the outside roof, chimney, walls and foundations to determine what damage has been done by the winter. Inspect all water and electrical systems before turning them on. Carefully go over the cottage from cellar to attic. Discard or repair broken furniture or equipment before putting it into use again.

The summer cottage is your home for a portion of the year, so you should not make it a catch-all for broken-down furniture not fit for your winter home. That rickety chair in your summer cottage can injure you just as badly as if you had kept it at home. When we close the cottage at the week-end or end of the season, we should make a final inspection to see that water and electricity are shut off. Oiled rags and oiled mops should not be stuffed in corners or closets. They should be out where the air can get at them, or better still put them in covered cans.

Do not keep or store flammable liquids. The wise cottage owner purchases just enough to do the job and if any is left over he will dispose of it in a safe way. It is suggested a small hole be dug in the ground and the flammable liquid poured into it. When it has drained off refill the hole with dirt. Never pour flammable liquids into sinks or toilets.

28 Years of Successful use in treating burns!

KEEP **KIP** HANDY

Easy spreading antiseptic ointment. Packed in tubes and tins. In liquid form, too—Kip Antiseptic Oil (with benzocaine).

See your Safety Appliance Jobber
Samples Sent On Request



KIP, INC. 778 E. Pico St., Los Angeles 21

To Be
SAFE
Tomorrow
Get
KIP
Today!

Trailers and trailer camps: With the high cost of living and the tight hotel and motel situation, more and more trailers are finding their way on the highways. These trailers present additional problems of safety on highways and in the trailer way of life. There are numerous safety suggestions. The first important thing to remember is not to overload the trailer. Overloading will give poor control and poor braking power.

All couplings should be of an approved type of forged or stamped steel securely attached to the frame of the car and the yoke of the trailer by welding and not by bolting. The American Society of Automotive Engineers has specifications relating to trailer coupling, and they should be adhered to. Safety chains and automatic brakes should be used in event of failure of the hitch. At least two safety chains capable of holding the trailer should be used. Good tires and wheels are essential to safety.

Directional signals and stop lights are important and a check should be made before making that trip to see that they are in good operating condition. Flares should be provided when the trailer is stopped in the dark.

The next thing is to find that trailer camp that you have marked off on your itinerary. Just as you approach that turn to go in camp, give the fellow who is driving behind you ample time to slow down by using your signal or directional light. He has difficulty in seeing you make that turn, especially when he is driving close.

Now that a space has been assigned you for parking you may set up the parking legs under each corner of the trailer to steady it. Grounding of the trailer is important when the vehicle is connected to an outside power supply. Fire extinguishers are a must. They should be located near the door, and in no case near the cooking or heating stove. Flameproofing of fabrics, such as curtains and upholstery, is very desirable. All lamps, stoves requiring liquid fuel should be filled outside the trailer. The flue pipes for heating stoves and cooking stoves should be thoroughly

PROTECTS HANDS AGAINST OIL, GREASE, GRIME, PAINT Saves Job Time



Du Pont "PRO-TEK" acts
like an invisible work glove

You protect workers' hands and save production time with Du Pont "PRO-TEK." This hand cream acts like an invisible work glove—guards the skin against grease, grime, paint and insoluble cutting oils. It is easily applied by workers before they start the job. "PRO-TEK" washes off quickly, easily with plain water—carries all the grime down the drain. It saves job time . . . maintains production efficiency . . . and boosts morale.

Ask your supplier for Du Pont "PRO-TEK" now. Or write E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.



PRO-TEK
HAND PROTECTIVE CREAM

DAV-SON GENUINE SELF-SEALING CORK BULLETIN BOARDS

The bulletin board that lasts and lasts

Insist on Dav-Son genuine self-sealing cork—tack holes disappear. Natural finish hardwood frames with mitered, glued corners add to long life of Dav-Son bulletin boards. Sizes from 12x18 and larger, with or without locking glass doors. \$4.15 up. Also with metal frames for inside or outside use.



Dav-Son Safety Director with color, light, motion, easy changeable letters for up-to-minute messages, peak attention. \$39.75, letters incl.

A Dav-Son board for every purpose. Over 100 different sizes and styles to choose from.

Dealer Inquiries Invited.

If your dealer doesn't have the Dav-Son board you need, write direct.

A. C. DAVENPORT & SON, Inc., Dept. NSN,
311 N. DESPLAINES STREET • CHICAGO 6, ILLINOIS



vented to the roof of the trailer.

Now that the trailer is set up on legs and the power has been turned on, check on that tank of propane gas and see that the fittings are tight and see that there are no leaks.

Drinking water is a very important factor. Make sure that it comes from a good source and that it is chlorinated. If you are not sure, it can be purified by boiling it for half an hour, and the flat taste can be easily removed

by pouring it back and forth from one clean container to another.

By keeping that screen door tightly shut—you will prevent the mosquitoes from bothering you at night. If you use insect sprayer indoors read the directions, remembering that most liquid type sprayers are flammable.

The camp: When planning a camping trip we have many problems to consider. It is of utmost importance that we plan every step of the way. I suggest

you try one overnight camping trip before venturing on any long-term camping experience. The organized or provisional camp presents most of the hazards of the cottage, except that the shelters are more portable, and living conditions more rugged.

I have been associated with a Boy Scout Camp for more than ten years. We provide camping experience for more than 500 boys each week during the months of July and August. We also provide short term camping facilities for scouts during the balance of the year. What we do may be done in whole or in part in any camp.

Our camping committee is responsible for both the physical equipment and the program offered to our campers. The physical equipment responsibility involves the selection of the individual camp site. We place our tents on platforms and locate them on a flat area or near the crown of a hill. We group our tents in what we call villages of ten to twelve



**Show This
Safety Film
FREE!**

**SAFE
EXIT**

Use this fine safety film, "SAFE EXIT," in your safety program at school, plant or club meeting. Dramatically filmed and edited by the makers of VON DUPRIN Fire and Panic Exit Devices, "Safe Exit" is a public service film devoted to the promotion of safety education . . . and offered to you *absolutely free*. It is in no sense a product story.

"SAFE EXIT" is a 20-minute, 16 mm, black and white sound movie, ideal for use in any safety training program for children or adults or for informal luncheon club or PTA meetings.

It costs you nothing to show "SAFE EXIT"—not even postage! Just fill in and mail the booking coupon request below. Send it today . . . help promote safety all year long.



VONNEGUT HARDWARE CO. VON DUPRIN DIV.
408 West Maryland
Indianapolis 9, Indiana

Date _____

Yes, we wish to show the 16 mm, sound, B & W movie, "SAFE EXIT."

Date desired _____

or _____

Type of audience _____

Expected attendance _____

We understand film is absolutely rent free, postage paid. We agree to return film the day following our showing.

Organization _____

Authorized by _____

Address _____

City _____

Zone _____

State _____

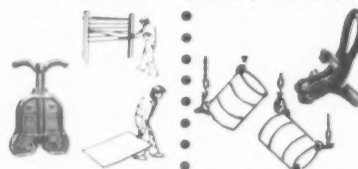


MERRILL MATERIALS HANDLING DEVICES



LIFTING CLAMP

TWIN LIFTER



HAND GRIP

DRUM TILTER

4 SIZES



3 M 4

DRAG CLAMP

DRUM OPENER

MERRILL BROTHERS
56-28 ARNOLD AVENUE
MASPETH, N. Y.

two-man tents. Each village has its own water supply and toilet facilities.

Where camp fires and outdoor cooking is permitted we see that all members are properly instructed to build a fire in a cleared area, build a fire adequate for the need. We take our lessons from the Indian: "White man make heap big fire and stand way off. Indian make little fire and set down side him." When the camp fire program is finished we thoroughly wet down the area, dig a hole, bury the ashes, cover it over, place a rock on top to indicate that a camp fire has been on this spot.

Poison ivy or poison oak should be removed from campsites.

Trichinosis and undulant fever are real dangers and care should be taken in buying meat and milk.

Several extension cords plugged into one socket indicate the dangers of overloaded electric wiring and we should not add radio, electric iron, or cooker, or electric heater, to the overload.

I'm Sick of the "3 E's"

—From page 23

That's about the way it will go, and don't tell me I'm wrong because I've seen it happen too often. So have you.

Our speeches and publications condemn us nearly ten-to-one. How many articles, for example, have you seen in NATIONAL SAFETY NEWS or any of the other

safety publications recently on honest-to-gosh engineering? A few advance prints of data sheets, perhaps, something about static electricity, testing how slippery floors are, air pollution.

Look them over yourself. I did. The ratio is all the way from two-to-one to ten-to-one, depending on how loosely you define the word "engineering."

The Diary of a Safety Engi-



**How You Can Have
HAPPIER
EMPLOYEES
... BETTER
WORKERS**

Sanitor

TISSUE TOILET SEAT COVERS

**SEE FOR YOURSELF
ABSOLUTELY FREE!**



Limited to industrial users only! We'll send you free of charge, with no obligation whatsoever: (1) An attractive Sanitor metal dispenser with exclusive one-at-a-time ejector; (2) A generous supply of Sanitor tissue toilet seat covers. It's yours *permanently*—you need *not* return it! We want you to see the benefits of Sanitor service in your own restrooms. Prove to yourself how efficiently and economically Sanitor solves serious restroom problems. Observe enthusiastic employee reaction. We're confident that like hundreds of major industries (names available on request), your company too will become a steady Sanitor customer.

• END RESTROOM FEAR

As all personnel executives know, happier workers are more efficient, produce more. No matter how clean you keep your restrooms, there is always a lingering fear of infection. Sanitor tissue toilet seat covers assure hygienic conditions. Employees, visitors too, appreciate this indication of respect for their decency.

• CLEANER RESTROOMS; NO PLUMBING STOPPAGES

Flushing automatically disposes of Sanitor tissues... *can't* clog drains. No mess, no litter. Restrooms stay cleaner longer... plumbing remains in good repair.

• SAVE MONEY... 3 WAYS

(1) Maintain health and morale for peak efficiency. (2) Stop wasteful use of toilet tissue and paper towels as makeshift covers. (3) Save on maintenance: less cleaning time required; eliminate major source of expensive plumbing breakdowns.

MAIL THIS COUPON TODAY

SANITOR MFG. CO., Dept. B
Kalamazoo, Michigan

Please send Sanitor dispenser, tissue toilet seat covers and literature—absolutely free, no obligation.

COMPANY
ADDRESS

CITY ZONE STATE
BY DEPT.

WORLD'S LARGEST STOCK OF SAFETY BADGES



1933 SERIES... 1 1/4" dia. hard glazed enamel, heavily gold plated. Pin and safety lock catch. \$10.50 dot. (plus Fed. Tax.)



**SAFE DRIVER AWARDS
NO ACCIDENT PINS
SERVICE EMBLEMS
PLAQUES—TROPHIES**

Write for FREE 32 Page Catalog

CLARENCE WILLIAMS

WILLIAMS JEWELRY & MFG. CO.
Silversmiths Bldg. 10 S. Wabash Ave.
Phone: CEntral 6-5018 Chicago 3, Ill.

neer? Sure, it's a very interesting, readable, imaginative yarn. But it should have been called *The Diary of a Safety Pedagogue*. There's not a lick of engineering in it. Human engineering perhaps—that's a word pseudo-psychologists use who don't like to be called school-teachers or policemen but who aren't either engineers or psychologists.

So the roller-table idea is impractical, is it? An engineer would

find out. He'd beg, borrow or steal a stop watch, put on some old clothes and spend enough time in the plant to find out exactly how much time is used by the method that caused the back strain.

Then he'd beg, borrow, steal or build the roller-table, browbeat the superintendent if he had to into giving his idea a trial, and play like an engineer while he

made a simple time-study of the new method. If his idea turns out to be wrong, he's still ahead. He's learned something.

Most of all, he's probably developed a little respect for management's ideas. Vice versa, the super and maybe the plant manager may have developed at least a little respect for the safety engineer—seeing him in dirty pants for the first time, trying to learn the job he should have learned before he called himself a safety engineer.

Probably, however, the idea was a good one. So much the better. Proving it will be a cinch if he has the facts and figures to back him up. Furthermore, each time he tries something like this, he breaks down his reputation for being "impractical."

Little by little, then, we can, and we must, use engineering methods to build our reputations, to get facts, to change minds, to shape attitudes.

One thing more. Sometime I'm afraid, one of the brothers is going to stand up and bring down the house with: "It should be obvious to everyone here that all three E's will always be necessary to a successful safety program." Fooy! If that brother expects me to sit on the seat of my pants and swallow that old guff again he's sorely mistaken. That's the kind of propaganda that's put us on the spot we're on today.

Are Education and Enforcement necessary? I'm sorry to admit that they're extremely necessary today, and they will continue to be just as long as we continue to prefer pedagogical and police methods to elementary, simple engineering.

They'll always be helpful, and I earnestly hope that we'll work toward the day that they *will* simply be helpful—useful adjuncts to true safety engineering, not crutches which, by their continued use keep us wholly dependent on them.

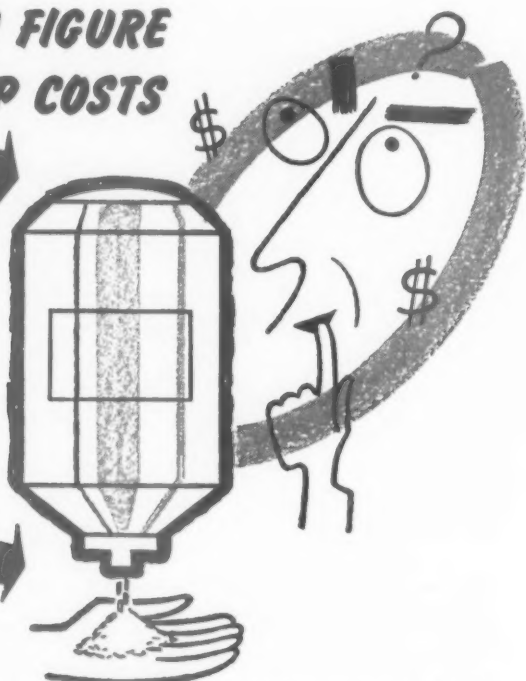
Right now, they're necessary to help us continue to do the half-way job we're doing. Most of us, and I'm including myself, are at best only half-way engineers.

I'm not a very good safety engineer. Maybe I will be some day. I certainly won't if I'm satisfied

DO YOU FIGURE YOUR SOAP COSTS

AT THIS END?

OR THIS END?



You might think you're saving money when you pour a "cheap soap" in the top of your dispensers. Actually it's the number of washes that come out the bottom—the cost per wash—that really counts. Does your present soap lather quickly or do your workers have to use a hand full and rub and rub to get results? (A slow acting soap causes congestion in wash rooms—you pay for the "lost time".) Does your present soap get hands clean with one shot or does it take half a dozen? Does it really do the job at all? Is it tough on hands? Does it cause chapping, drying or other skin irritations? Are your soap dispensers in proper working order or are they wasting soap because they're out of kilter?

Get the answer to these and other questions about your soap costs the easy way. Mail the attached coupon for a FREE "SBS Soap-Saver-Survey" today at absolutely NO Obligation on your part.

SUGAR BEET PRODUCTS CO., SAGINAW, MICHIGAN

Chemical By-products Division • Established 1909

MANUFACTURERS OF THE COMPLETE LINE OF SBS INDUSTRIAL SKIN CLEANSERS

SUGAR BEET PRODUCTS CO., Dept. 4D, SAGINAW, MICHIGAN

88

Yes—we want a cost reducing "SBS Soap-Saver-Survey" of our plant without charge or obligation.

NAME _____

TITLE _____

COMPANY _____

CITY _____

ZONE _____

STATE _____

with police and schoolteacher methods of accident prevention.

I feel very sincerely it is time we realized that we have bungled and are continuing to bungle the job we're supposed to do by following practices which well-meaning and half-competent safety engineers have developed in the past.

Practices which can scarcely be expected to attract engineering college graduates, much less provide those of us here today with a hook by which we can raise our own personal standard of living.

Practices which have raised our profession, in short, to its present high standard of mediocrity.

The latest edition of *Accident Facts* will bear me out. In spite of the efforts of some of the country's best copy writers and chart designers, the record of industrial accidents it presents is dismal. It's nothing to be proud of.

Even the outstanding individual plant records of the past have to be considered in the light of what happened when the teach-and-enforce methods which were primarily responsible for them were abandoned and the safety man was transferred to another job. In a properly engineered plant, this could never have happened.

Happily, there are exceptions. Brown-Foreman's Blue Grass Cooperage plant in Louisville is an outstanding exception. There are dozens of other exceptions—perhaps hundreds. I wish all of us here could truthfully say that we know there are thousands. I'm afraid we can't, but I know we *could* if we all practiced at our profession daily as well as we do occasionally.

Those of you who have been fortunate or unfortunate enough to read, as I have read the papers and speeches of other thousands of safety engineers, know that there are occasional bright, hopeful spots in this picture.

Every so often, a well thought-out jig will be recommended in place of a saw guard, improved material storage and waste disposal rather than an additional clean-up man, and a more efficient means of handling heavy material rather than hard-toed shoes.

If it can be done occasionally,

Are You Fully Protecting the Feet of Your Employees?



"SANKEY" IMPROVED FOOT GUARD equipped with Anti Skid TOE CLIP.

"SANKEY" FOOT GUARDS consist essentially of a metal shield to be worn over the shoe whenever the foot is in danger of being either crushed or cut. The metal shield is designed to furnish a maximum amount of protection to the entire front of the foot—not merely the toes alone, but also to the instep against hazards from falling, rolling or flying objects, or from accidental tool blows. Write for literature or a trial pair.

ELLWOOD SAFETY APPLIANCE COMPANY
219 SIXTH STREET ELLWOOD CITY, PENNA.



Combination
Foot-Shin Guard



Foot Guard Equipped
With Anti-Skid
Full Sole



Fibre-Shin and
Shin-Knee Guard



Stop Doing It The Old Fashioned Way

Protect those who are using dangerous, old fashioned hand, foot and bar methods of closing hopper bottom car doors with latch-type locks.

Prevent ruptures, strained backs, smashed fingers and other serious injuries by providing the Prescott Safety Tool. Write today for free folder. **THE TRUMBULL MFG. CO., WARREN, OHIO.**

When Heat Hits...

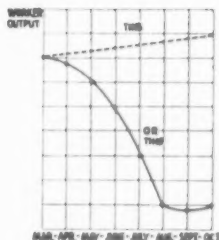


THE NEED IS FOR STASAFE KOOLPADS

Ever try to see clearly when rain streaks the windshield? Remember how lights glare and objects seem dim and misshapen? That's just what happens when you try to look through sweat-streaked lenses. Output slows down, rejects mount, and your costs skyrocket!

Featherweight, cellulose sponge KOOLPADS soak up the sweat BEFORE it can blur your sight. In hot weather, or on hot jobs in ANY weather, KOOLPADS pay for themselves over and over by promoting . . .

- Greater Comfort
- Better Vision
- Higher Production



Write in Today
for Bulletin No. 14

STANDARD SAFETY EQUIPMENT COMPANY

232 WEST ONTARIO STREET CHICAGO 10, ILLINOIS

NEWARK 4, N. J.
597 BROADWAY

CLEVELAND 6, OHIO
2029 EAST 103rd ST.

LOS ANGELES 16, CAL.
2952 CRENSHAW BLVD.

PLANT SAFETY

...the Supervisor's Role

The supervisor's importance in any program of industrial accident prevention is stressed in our booklet, "Safety As It Applies to Supervisors." Drawn from the wide experience and professional knowledge of Marsh & McLennan's safety engineers, the information and recommendations presented are being applied by many progressive companies in varied industries throughout the United States and Canada. Write for your copy today.

MARSH & McLENNAN

INCORPORATED

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Chicago, 231 S. La Salle St. New York, 70 Pine St. San Francisco, Russ Bldg.
Minneapolis, Detroit, Boston, Los Angeles, Toronto, Pittsburgh, Seattle, Vancouver
St. Louis, Indianapolis, Montreal, St. Paul, Duluth, Portland, Buffalo, Atlanta
Calgary, Washington, Tulsa, Phoenix, Milwaukee, Cleveland, Havana, London

it can be done frequently. It can't be done *all* the time, but it *must* be done *most* of the time—even-
tually.

I'll not now or ever agree that Education and Enforcement are on a par with Engineering in our work. They can't be if we're actually engineers.

Those who prefer to be known by some such title as Practitioners of Accident Prevention Pedagogy are welcome to disagree. I want to be a Safety Engineer in spite of them because it's only as an engineer that I feel competent to shape *anybody's* attitude.

The hands that rule the paper and rock the world aren't school-teachers' hands. They're not policemen's hands. They're engineers' hands. Some day they may even be safety engineers' hands.

Contractors Set New Records in 1952 Campaign

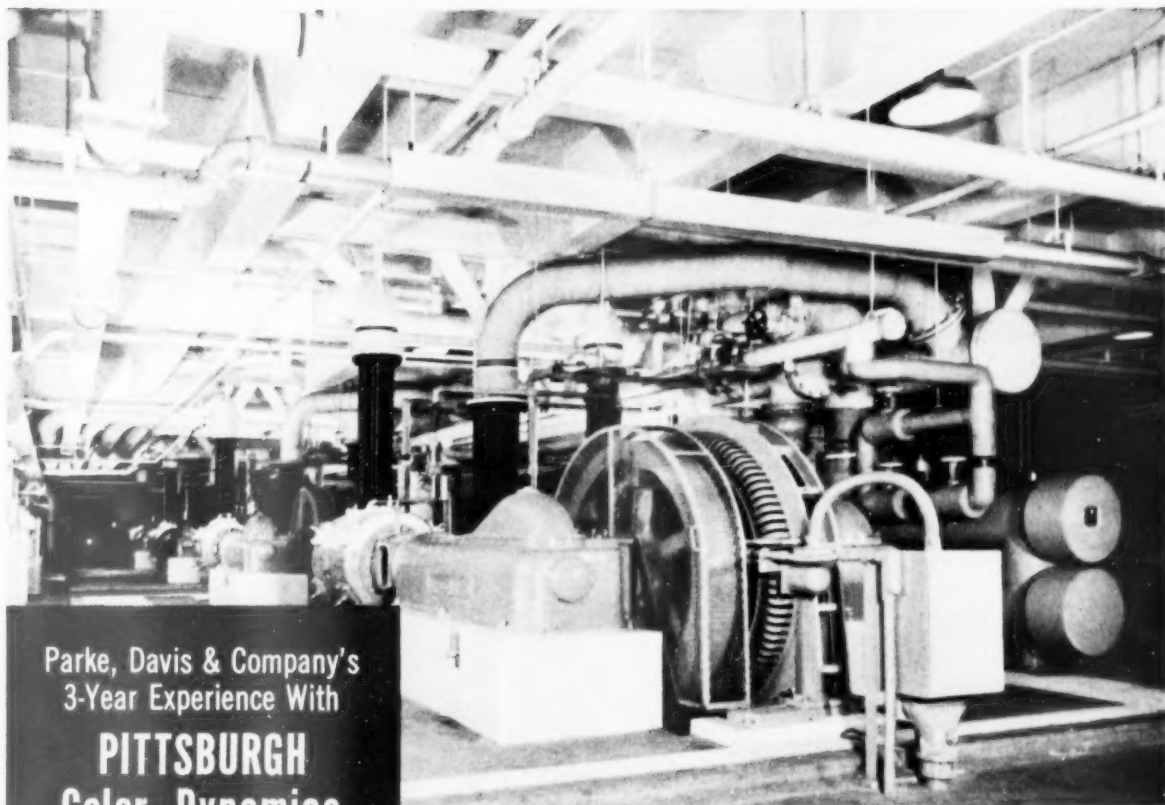
CONSTANT WORK by leaders of the construction industry to reduce job accidents was exemplified in Miami this week, March 23-26, when The Associated General Contractors of America, Inc., named 207 member firms and chapters to receive awards for outstanding safety records.

This marked increase from 120 similar awards presented to winners last year makes association officials feel that the A.G.C. safety program is saving lives and reducing over-all construction costs.

H. B. Alexander, Harrisburg, Pa., Chairman of the Accident Prevention Committee, reported to the contractors' 34th annual convention that the result of such a program is measured in lower insurance rates for contractors, less human suffering for employees and more construction for the public's dollar.

The frequency rate last year dropped substantially among those firms participating in the A.G.C. safety program—from 44.5 in 1951 to 32.5 last year. This rate represents the number of accidents per 1 million man-hours worked.

Harry J. Kirk, Washington, D. C., A.G.C. safety director, noted a 75 per cent increase in members participating in the program.



Parke, Davis & Company's
3-Year Experience With

PITTSBURGH Color Dynamics

Shows Greatly Increased
Operating Efficiency!

Modern scientific painting system which puts color to work
contributes also to improvement of work morale
and attendance in Antibiotics Division.

CONVINCING PROOF that Pittsburgh COLOR DYNAMICS contributes to production efficiency and employee morale is offered by the three-year experience of Parke, Davis & Company, Detroit, prominent manufacturer of pharmaceutical products.

● In the summer of 1948, Parke, Davis & Company completed a new building specially designed and splendidly equipped to manufacture antibiotics. Chloromycetin, a new drug with global demand because of its efficacy in combating many types of virulent diseases, is the chief product made in this new building.

● The interior of this mammoth structure—with its batteries of tanks, its miles of code-marked pipes, its series of laboratories and packaging rooms—was completely "color engineered" according to principles of COLOR DYNAMICS.

● Just how this modern painting system has aided production and morale is best expressed in this recent

comment of W. H. Mohrhoff, Superintendent of the Antibiotics Division:

● "When this new building was completed three years ago, we established production standards which were based upon such physical factors as new and better equipment and improved processes. We also took into consideration the greater amount of natural light the design of the new building gave us. The one intangible we were unable actually to measure was the purposeful use of color.

● "Our records show that production efficiency has averaged nearly thirty per cent greater than our estimate based on the tangible factors. At times it has been up sixty per cent. Much of this increase can be attributed to COLOR DYNAMICS.

● "At the same time, our attendance has been better than that in similar departments. There can be no better evidence of what our workers think of COLOR DYNAMICS than the many requests for transfer to this

building. Even laboratory workers seek to be transferred because they recognize they can do more and better work—with less nervous tension and physical fatigue.

● "Our experience with Pittsburgh COLOR DYNAMICS has fully confirmed our opinion that color, properly applied, can be helpful to management and employees alike."

COLOR DYNAMICS Engineering Study for Your Plant—FREE!

● Why not try COLOR DYNAMICS in your plant—on a machine or two, or in one department—and see the difference it makes? For an explanation of what COLOR DYNAMICS is and how it works, send for our free booklet. Better still, let us make a color engineering study of your plant, or any part of it, free and without obligation. Call your nearest Pittsburgh Plate Glass Company branch and arrange to have a trained color expert see you at your convenience. Or send coupon below.

Mail This Coupon For FREE Booklet!

Pittsburgh Plate Glass Co., Paint Div.
Department NS-53, Pittsburgh 22, Pa.

☐ Please send me a FREE copy of your Booklet "Color Dynamics."

☐ Please have your representative call for a Color Dynamics Survey without obligation on our part.



Name _____

Street _____

City _____ County _____ State _____

Copyright 1953 Pittsburgh Plate Glass Co., Pittsburgh, Pa.



PITTSBURGH PAINTS

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

For a Successful Poster Program



JUMBO POSTER FOR JUNE, 1953

The Jumbo poster, issued monthly, is designed for outdoor use and is available to members on annual subscription but is not stocked. Its actual size is 9' 11" by 11' 8".

THE 1953 Poster Directory contains miniatures of 756 posters—top-notch selections on a great variety of subjects. Extra copies available at 50 cents each—write Membership Dept., N.S.C.

Posters miniatures on these pages are new—shown here for the first time.

Those posters illustrated in one color on the following two pages are actually printed in two or more colors.



NATIONAL SAFETY COUNCIL

9871-A

8 1/2 x 11 1/2



NATIONAL SAFETY COUNCIL

9866-A

8 1/2 x 11 1/2



NATIONAL SAFETY COUNCIL

9895-C

25 x 38

The above four color posters are available only to Council members who have earned the Award of Merit or the Award of Honor. Awards are given automatically to member companies who qualify on the basis of reports submitted to the Council as provided in the "Plan for Recognizing Good Industrial Safety Records."

Above new "C" poster, issued monthly, is indicative of the other two color posters—shown in one color on the following pages and in the 1953 Poster Directory.

Electrotypes of poster miniatures on this page are not available, nor can payroll inserts be supplied.

Posters below are printed in two or more colors
(Available only in sizes indicated)



NATIONAL SAFETY COUNCIL
9723-A 8½x11½



NATIONAL SAFETY COUNCIL
9786-A 8½x11½



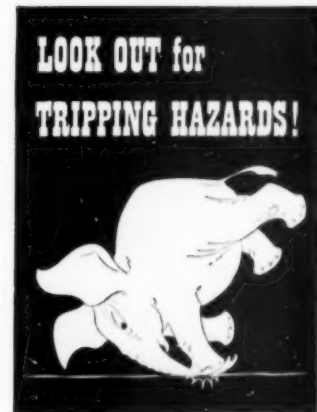
NATIONAL SAFETY COUNCIL
9825-A 8½x11½



NATIONAL SAFETY COUNCIL
9865-A 8½x11½



NATIONAL SAFETY COUNCIL
9845-B 17x23



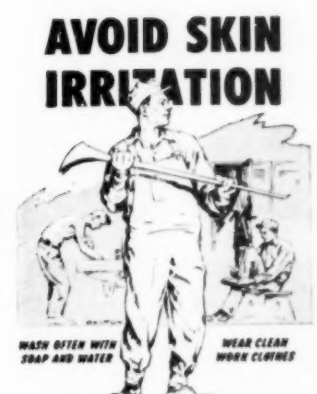
NATIONAL SAFETY COUNCIL
9894-B 17x23



NATIONAL SAFETY COUNCIL
9875-A 8½x11½



NATIONAL SAFETY COUNCIL
9832-A 8½x11½



NATIONAL SAFETY COUNCIL
9876-B 17x23

Electrotypes of payroll inserts can be furnished in all poster illustrations shown above.

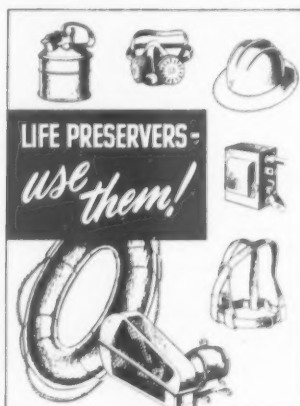
Posters below are printed in two or more colors
(Available only in sizes indicated)



NATIONAL SAFETY COUNCIL

9834-A

8½x11½



NATIONAL SAFETY COUNCIL

9884-B

17x23



NATIONAL SAFETY COUNCIL

9843-A

8½x11½



NATIONAL SAFETY COUNCIL

9857-A

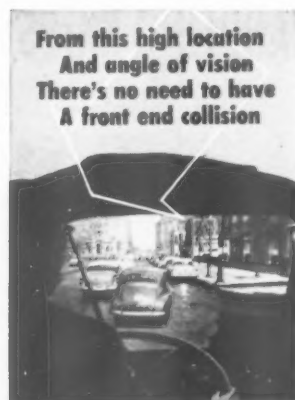
8½x11½



NATIONAL SAFETY COUNCIL

9868-A

8½x11½



NATIONAL SAFETY COUNCIL

V-9883-B

17x23



JUDGEMENT OF SAFE FOLLOWING DISTANCE IS YOUR RESPONSIBILITY

NATIONAL SAFETY COUNCIL

V-9880-B

17x23



NATIONAL SAFETY COUNCIL

V-9881-B

17x23



NATIONAL SAFETY COUNCIL

V-9882-B

17x23

Electrotypes of payroll inserts can be furnished in all poster illustrations shown above.

Distinguished Service

—From page 62

Jos. Bancroft & Sons Co., Production Dept.

Bemis Bros. Bag Co., Packaging Service, Minneapolis, Minn.

Bethlehem Steel Co. (Entire company).

Borg-Warner Corp., Morse Chain Co. Division, Ithaca, N.Y.

The Buckeye Cotton Oil Co., Cellulose & Specialties Division.

Canadian Industries, Ltd., Belocil Explosives Works.

Canadian Industries, Ltd., Brownsburg Works.

Canadian Industries, Ltd., Canadian Safety Fuse Company, Ltd.

Canadian Industries, Ltd., Central Research Laboratory.

Canadian Industries, Ltd., Shawinigan Consolidated Works.

Canadian Industries, Ltd., Windsor Works.

Celanese Corporation of America, Bridgewater, Va., Unit.

Celanese Corporation of America, Burlington, N.C., Unit.

Celanese Corporation of America, Summit, N.J., Unit.

Chapman Valve Mfg. Co., Indian Orchard, Mass., (Entire company).

Consolidated Paper Corp., Ltd., Port Alfred Division.

Crown Zellerbach Corp., Port Angeles Division.

Crown Zellerbach Corp., West Linn, Oregon, Unit.

Department of the Army, Corps of Engineers, General Building Construction.

Dow Chemical Co., Texas Division, Dravo Corporation, The Contracting Division.

Electric Hose & Rubber Co., Wilmington, Del. (Entire company).

Electro Metallurgical Co., Niagara Falls, N.Y., Unit.

Firestone Tire & Rubber Co., Bombay, India, Plant.

Firestone Tire and Rubber Company, Buenos Aires, Argentina, Plant.

Firestone Tire and Rubber Co., Gastonia, N.C., Mill.

Firestone Tire and Rubber Co., Port Elizabeth, S. Africa Plant.

Firestone Tire and Rubber Co., Sao Paulo, Brazil Plant.

General Mills, Inc., Belmond, Ia., Unit.

The Glidden Co., Soya Products Division.

Goodman Manufacturing Co., Chicago, Ill. (Entire company).

The B. F. Goodrich Co., Cadillac Plant, Cadillac, Mich.

The B. F. Goodrich Co., DuBois, Pa., Plant.

The B. F. Goodrich Co., Marietta, Ohio, Plant.

The B. F. Goodrich Co., Oaks, Pa., Plant.

Goodyear Tire & Rubber Co., New Bedford, Mass. Unit.

Goodyear Tire & Rubber Co., New Toronto, Canada Unit.

Harbison-Walker Refractories Co., Baltimore Works.

Hart & Cooley Mfg. Co., Grand Rapids, Mich. (Entire company).

Hussman Refrigerator Co., St. Louis, Mo. (Entire company).

Hershey Chocolate Corp., Hershey, Pa. (Entire company).

Industrial Rayon Corp., Cleveland, Ohio, Unit.

International Silver Co., Factory E, Meriden, Conn.

The Jeffery Mfg. Co., Columbus, Ohio (Entire company).

Jones & Laughlin Steel Corp., Cleveland Works Division.

Kaiser Steel Corp., Fontana, Calif., Unit.

Kellogg Company, Battle Creek, Mich., Plant.

LaSalle Steel Co., Hammond, Ind., (Entire company).

Maui Pineapple Co., Ltd., Kahului, Maui, Hawaii (Entire company).

Michigan Carton Co., Battle Creek, Mich. (Entire company).

Monsanto Chemical Co., Plastics Division, Springfield, Mass.

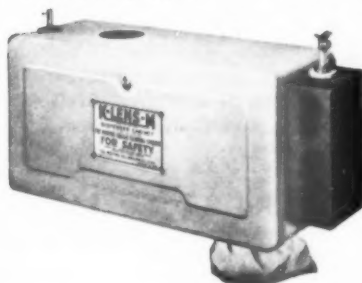
National Biscuit Co., Atlanta, Ga., Unit.

—Next page



Stops fogging and steaming of eyeglasses and goggles—glass or plastic.

Easily applied, K-LENS-M Anti-Fogging Liquid forms an invisible coating that resists formation of fog or moisture on lens surfaces . . . brings clear vision to eyeglass wearers under severe conditions of hot steaming vapors, freezing temperatures, humid summer heat, or body perspiration . . . overcomes hazards of fogged goggles . . . increases worker efficiency and safety.



ANTI-FOGGING STATION
(Attaches Securely to Cabinet)

FINGERTIP SPRAY PUMP
(No Air Pressure Needed)

EASILY INSTALLED—SERVICED
(Locked In by Cabinet Door)

Send for **FREE Sample**,
on your company letterhead

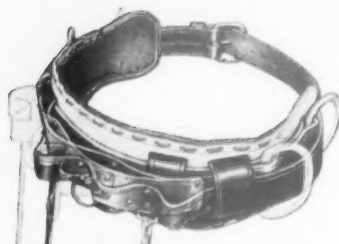
Manufacturers of

K-LENS-M

Liquid Lens Cleaner
Lint-Free Lens Tissues
Anti-Fogging Liquid
Dispenser Cabinets
Anti-Fogging Station

THE WILKINS CO.
INCORPORATED
CORTLAND 1, N. Y.

A Full 5 Inches of Body Movement With Ease and Safety



BASHLIN'S New Shifting Tool Dee Safety Belt

Next to Safety in the experienced lineman's book, Accessibility of Tools is of first importance in selecting a Safety Belt. This new Bashlin Safety Belt is designed with sliding tool loops . . . keeps tools within easy reach. And the built-in extra safety factor saves the Safety Strap from wear. It's Safe . . . Practical . . . Comfortable . . . and you know it's right. It's Bashlin.

Another First

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All industrial safety men in the Chicago area will play an active part in forthcoming Greater Chicago Safety Conference and Exposition (formerly the Midwest Safety Show) sponsored by the Greater Chicago Safety Council and cooperating agencies at the Conrad Hilton Hotel, Chicago, on June 2, 3 and 4.

Industrial meetings for supervisors, foremen, safety directors, and general plant personnel will feature sound practical information on civil defense, industrial relations, commercial vehicle operations, construction, training, fire prevention, material handling, electricity, industrial hygiene and many others.

Among the cooperating agencies who will hold meetings at the Show are the Cook County Traffic Safety Conference, the Illinois State Nurses Association, industrial nurses section, Greater Chicago Chapter of the American Society of Safety Engineers, and the Civil Defense Corps.

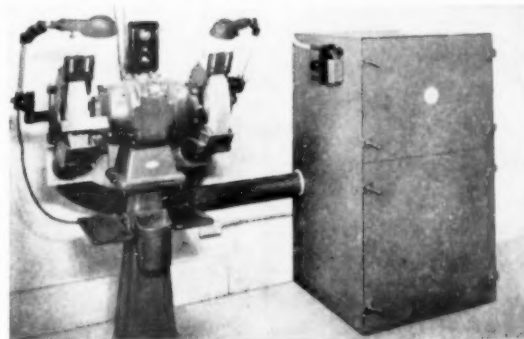
A special feature of the Conference on Thursday, June 4, will be an industrial training Course by Dr. Arthur Secord of Brooklyn, New York.

One of the highlights of the affair will be the awarding of 106 plaques in the Council's industrial and commercial vehicle accident prevention contests at a dinner on June 2. A full quota of safety exhibits will complement the show.

Attendance at the Safety Show reached an all time high of 6,576 in 1952, according to Joseph F. Stech, manager of the Council. Sixteen states and 832 companies were represented at the 1952 Show.

John J. Ahern, director, Department of Fire Protection and Safety Engineering, Illinois Institute of Technology, is president of the Council; B. M. Livezey, general superintendent, South Works, U. S. Steel Corporation, is general chairman of the event, and E. S. Beaumont, safety director, Peoples Gas Light and Coke Company is program chairman.

This year marks the 30th year that the Council has sponsored this event.



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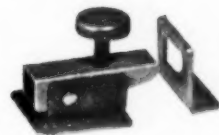
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Safety's Morocco Base

—From page 19

immensely popular and Americans working all over Morocco began to speak Arabic. It isn't fluent, not even very polite, but they have learned enough Arabic to tell their men what to do and how to do it.

Due to the high incidence of illiteracy among native employees and the confusion of three languages, French, Arabic, and English, educational posters showing the hazards of heavy construction work and the results of hazardous conditions, are used as safety lessons without words. These posters and pamphlets are prepared on the project by a commercial artist specialized in construction safety and are reproduced in color and in quantity by the inexpensive silk screen process. The subject matter is taken from construction work actually in progress in Morocco.

One of the principal safety problems has been in the transporting of personnel. Nouasseur Air Base is approximately 18 miles from Casablanca; Ben Guerir is 35 miles from Marrakech; Sidi Slimane draws its labor from several towns and villages in the vicinity. To provide transportation for thousands of native employees plus French and American employees, regularly scheduled labor trains run twice a day to and from each site, carrying 4,000 to 5,000 employees.

In addition to the trains, 100 trucks, 32 buses, and 7 semi-trailers are used exclusively for man-haul. The two most famous of the man-haul trailers are the "Queen Elizabeth" and "Queen Mary," two 40 foot 12½ ton wrecking trailers, pulled by 180 horsepower tractors.

Even with this equipment transportation facilities have always been limited and the equipment generally overflows with Moroccan personnel. Because orders to wait until trucks are stopped before getting on or off are considered arbitrary to a people accustomed to jumping on and off moving donkey carts without difficulty, it has been necessary to fence personnel in. A tail gate was

therefore designed of iron and heavy chain link fence wire, too high to vault over and with the latch below the level of the truck bed where passengers cannot reach it. There have been no fatalities from men falling or jumping off moving man-hauls since the installation of these gates.

Transporting materials and machinery in addition to personnel has been of such magnitude that it has often been necessary to employ drivers who are not fully capable or experienced. A Driver Testing and Training unit was established at the beginning of the program and due to the large turnover in native personnel it has been in continuous operation ever since. All drivers must have a Moroccan driver's permit and be screened through a Porto-Clinic test before employment. Approximately 30 per cent of the drivers tested, even though they have a valid Moroccan permit, are rejected because of poor or faulty vision.



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New drivers are given a road test and then instructed in the special requirements established by the Corps of Engineers for the operation of government vehicles. These instructions cover special speed limits, loading and unloading regulations, and off limit areas for vehicles in the cities.

Although the Moroccan Vehicle Code does not include a speed limit outside of towns and villages, a speed limit of 50 mph for sedans and pickups and 35 mph for trucks was established for Corps of Engineers vehicles to reduce the number of accidents which were the direct result of excessive speed for conditions. Because it is customary in Morocco to stop anywhere, even on the highway, to load or unload, drivers must be taught to park properly. New drivers often resist observing the regulations concerning off limits streets, but particularly in Casablanca, it has been necessary to route government vehicles around areas congested with animal and pedestrian traffic. Curiously

enough these congested areas are often on the widest and most popular boulevards.

Following the initial polishing of driving methods, regular attendance at the "Driver's Problem Lectures" are compulsory. These lectures deal primarily with concrete examples of the meaning of defensive driving and are made graphic through the use of miniature trucks and automobiles maneuvered in typical driving situations on a large table map. Vehicle accidents are reviewed and the means by which they could have been avoided are demonstrated.

Early in the program the danger of fire was recognized, not only from the type of building construction which is largely prefabricated wooden buildings, but from tea drinking Arabs and the sun itself.

The Arabs do love a hot glass of mint tea and are capable of building a fire, one straw at a time, in any place and under any conditions. Orders prohibiting the preparation of tea beside buildings often resulted in the Arabs preparing tea under the buildings; orders prohibiting the preparation of tea near trucks resulted in the Arabs preparing tea in the gasoline storage area. At one base a formal tea garden has been set up, and at the other bases areas are designated where fires can be built for tea.

As for the sun, a memorandum from a French advisor referred to entire forests burned by the Sirocco, the hot wind which blows periodically off the Sahara. Siroccos reached a velocity of 71 mph and a temperature of 113 degrees F. last year, which is not enough to send the construction camps up in flames but does increase the fire potential.

Special fire prevention precautions have been taken and twelve fully equipped fire trucks have been distributed among the three bases currently under construction. The fire trucks are manned by a heterogeneous group of Arabs, French, Spaniards, and Americans, depending on the shift. And one Englishman. As co-operation with the U. S. Air Force fire departments made English the

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predominant language. Arabs, French, and Spaniards practice fire department English regularly. "Ay, Mohamed, breeng zee hose ofer here!"

The men who work on the Moroccan Air Bases like to think that safety is now under control, but in Morocco anything can happen. Once some happy Arabs put a friend in a cement mixer and turned it on to see what would happen; a Frenchman woke up to find, "My truck and I were on our backs." And there is always the case of the laborer who took off across a lumber pile on a Clark Fork Lift at noon while the operator was asleep and incidentally ran over another man. Why did he take the fork lift? "Because Allah told me to try it out."

Danger from the Sky

—From page 21

lightning as well as rain.

Boats, particularly sailboats, are struck fairly frequently, sometimes with fatal results to the crew. Automobiles are seldom struck and, if they are, the charge will jump the few inches between the wheel rims and the ground. The occupants being shielded by the sheet-metal body of the car will be uninjured.

Swimmers are sometimes badly shocked and occasionally killed when lightning strikes the water in which they are swimming. The best rule is to get out of the water when a thunderstorm is approaching.

When you are in a relatively flat, open area, such as the average golf course, you are higher than the surrounding terrain and, as such, are a target for a stroke. Similarly, the mast of a sailboat is a projection above the water-level plane and consequently is more liable to be struck.

The American Standard Code for Protection Against Lightning.*

*National Bureau of Standards Handbook 46 Code for Protection Against Lightning, is available from the American Standards Association or the Superintendent of Documents, Government Printing Office, Washington 25, D.C. for 40c per copy.

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National Safety News, May, 1953

recently revised, gives the following simple rules for protection of persons:

101. Personal Conduct.

(a) Do not go out of doors or remain out during thunderstorms unless it is necessary. Stay inside a building where it is dry, preferably away from fireplaces, stoves, and other metal objects.

(b) If there is any choice of shelter, choose in the following order:

1. Large metal or metal-frame buildings.
2. Dwellings or other buildings which are protected against lightning.
3. Large unprotected buildings.
4. Small unprotected buildings.

(c) If remaining out of doors is unavoidable, keep away from

1. Small sheds and shelters if in an exposed location.
2. Isolated trees.
3. Wire fences.
4. Hilltops and wide open spaces.

(d) Seek shelter in a cave, a depression in the ground, a deep valley or canyon, the foot of a steep or overhanging cliff, dense woods, or a grove of trees.

The question of the effectiveness of lightning rods is frequently brought up. The farm buildings of Iowa form a rather interesting testing ground. Approximately one-half are protected and the balance are unrodded. The losses over the period 1930 to 1949 show a fire loss of only \$380,841 for the rodded buildings but \$2,539,009 for the unrodded structures. These results indicate that rodding is a very real protection.

The question is frequently asked—"If lightning rods have proved desirable in farm areas, why aren't they equally desirable in the city?" The answer lies in the fact that a group of farm buildings are generally the only buildings for a considerable distance; frequently they are in the center of an 80 or 160 acre tract with fields or pastures around them and generally are the highest objects in that area. In the case of houses in the city, they are closely packed, reasonably uniform in height and in most cities there are several houses to the acre; if we assume that there are three, then there would be roughly 2,000 structures to the square mile, whereas in farm areas the number might be from 12 to 20 in a corresponding area. Since



SEE PAGE 43



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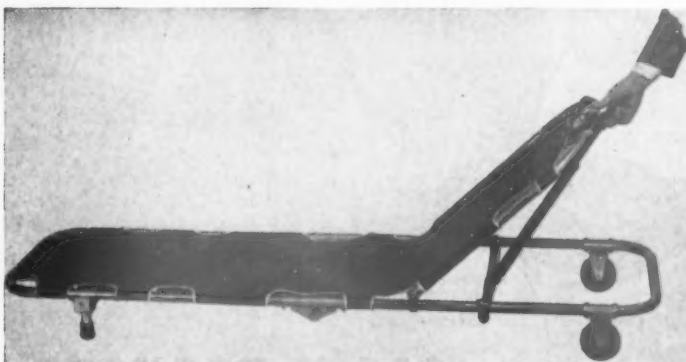
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the chance is good that a relatively high object will be struck, we have a ratio of about 200-to-1 that a farm house will be hit in a given period of time as compared to a house of the same size and height in the city. Consequently, most people feel that the percentage chance of their city home being struck is so low that the cost of protection is not warranted.

If your house is located on a high point even though you live in a city, protection may be desirable because of the greater probability of its being struck.

A very tall object in a city, such as a church steeple or tall monument, will almost invariably be struck and should be protected. The Washington Monument is struck several times a year, yet it is so well protected that persons within the Monument may not realize that it has been hit. The Empire State Building in New York is struck on an average of 30 or more times per year, yet tenants are quite unaware of the fact unless they realize that the flash and very loud crash are simultaneous. The General Electric Company has conducted lightning studies on this building and the story has been published under the title of *Playing with Lightning* by K. B. McEachron and T. J. Hagenguth (Random House, 1940). This is a most interesting story; written for the average layman, it gives an excellent background of the present knowledge of lightning.

Basically, the idea of building protection is simple. All high points such as chimneys, roof peaks, and the like, are protected with collector points connected to heavy connectors which in turn are connected to adequate grounds. The sizes of conductors and down runs (which connect the network with the actual grounding means) are given in the *Code for Protection Against Lightning*. Grounds should always be in multiple since, if dependence is placed on a single ground and the continuity of the connection is broken accidentally, the structure may be damaged by the stroke trying to get to ground. For the same reason, metallic masses, such as plumbing or heating systems inside the structure,

which are located within six feet of a down conductor are generally tied into the lightning system to avoid side flashes to such grounded metallic masses. The multiple ground system also furnishes a more direct path to ground for a flash striking at the side of a building.

The grounding is generally accomplished by clamping each down conductor to a pipe or rod which has been driven deep enough to reach a layer of permanently moist ground. In most locations, this will be at a depth of six to eight feet. Where the soil is very dry, or where there is rock within two or three feet of the surface, a ground loop of heavy stranded copper or galvanized wire is placed in a trench 15 to 18 inches deep and all down conductors attached to it.

Such loops are frequently used as part of the protective system for old and valuable trees. All of the old trees at Mt. Vernon (some of them planted by George Washington) are so protected. In such cases, the down conductors are led radially outward in shallow trenches to the loop which is of great enough diameter to be outside of the root area. If rods were driven close to the trunk the current from a stroke might seriously damage the roots.

A tall, grounded metallic object will give almost perfect protection to any object located within a 45 degree angle of its top, and any object within a cone making a 30 degree angle with the ground receives considerable protection. By using a series of grounded vertical steel poles, very good protection may be secured for structures within a cone making a 45 degree angle with the ground. If the tops of such poles are connected with heavy-stranded cable the volume protected becomes "tent shaped."

Such systems are widely used in industry, particularly for explosives loading units and similar plants where it is desired to keep the discharge well away from the structure but are seldom used for residences because of their more or less ungainly appearance. However, ornamental bronze flag poles could be designed and located so as to afford protection to moderate



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Steel cables stretched between steel towers or poles are frequently used to protect high voltage electrical equipment, in fact, almost all very high voltage transmission lines have one or more grounded conductors located above the phase wires (which are generally carried on suspension insulators) to protect the system against a stroke. The same system is sometimes used for oil tanks or other structures.

Wire fences, particularly when mounted on wood posts, may carry a lightning stroke a long distance and frequently kill cattle grazing along such a fence line. Wire fencing should be grounded at intervals of about 150 feet to prevent the transmission of this hazard to persons or animals at a distance from the point originally struck.

With present engineering knowledge, almost any structure can be made reasonably safe from lightning damage. Steel-frame buildings are inherently protected if the foundations are reasonably deep, but occasionally damage is done to brick, stone, or terra cotta copings when lightning makes its way through such material to the steel frame beneath it. This can be taken care of by a flat strip or small angle of metal placed along the outer edge of the masonry and connected at intervals to the building steel.

The basic principles of lightning protection should be understood by every safety engineer since it is both an occupational and an off-the-job hazard.

Dust Suppression

—From page 29

frame grinders without local exhaust ventilation gave dust concentrations similar to those at swing frames fitted with remote hoods and extraction fans. This suggested that remote hoods were inadequate.

An average of samples taken at pedestal grinders was then assessed because these machines are normally fitted with local exhaust ventilation through the wheel guard. The average dust concentration obtained was compared with that

given by portable grinders, pneumatic chisels and swing frame grinders, all of which were operating without exhaust. It was anticipated that there would be a considerable difference between these two averages, but this did not prove to be the case. This result may be due to the fact that the exhaust systems are drawing average dusty air from all over the workroom, or it may indicate that the local exhaust ventilation was not so good as expected.

While this exploratory work was proceeding, the engineers engaged in new designs for dust control apparatus asked for a method by which the dust movements in the air could be seen. They did not particularly want the method to be quantitative, because dust concentrations could already be determined when necessary. They did, however, want to see the locus of the moving dust clouds, particularly when local exhaust ventilation was applied.

This demand was met by the development of means by which the dust could be seen and photographed with a cine camera. The new technique has been used for empirical development work, and in an attempt to determine the natural flow of dust from its point of origin, in certain instances. The object was to use the dust to observe the aerodynamics of the system.

First results have shown that an abrasive wheel running without local exhaust ventilation and in laboratory conditions, may give a dust cloud which appears to circulate in a vortex above and behind the wheel itself. It was seen that the fine dust from a pneumatic chisel might flow up the arm of the operator, and was not projected along the path of the metal chips.

Observations were also made on floor-stand grinders fitted with local exhaust ventilation, when it was noticed that the fan effect of the wheel itself might be so great that the dust was projected from the front of the guard, and not extracted by the fan.

In one instance, two dust streams were seen on a pedestal grinder fitted with extraction ventilation. One stream was obviously caused by the fan effect of the



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wheel, because just above the wheel this dust stream was running out of the guard toward the operator. The other dust stream was moving into the guard immediately above the first one. The second stream was due to the dust extraction system fitted to the wheel, but it did not appear to contain as much dust as the outgoing stream. The implication is that a local exhaust system might extract air but fail to control dust.

Swedish engineers have been successful in avoiding use of hoods over small high-frequency furnaces. Because of the strong upward convection currents over a furnace it has been normal in the past to fit a hood and fan over the top to collect the rising fumes. These hoods are often a nuisance, especially if cranes are necessary. The high-frequency furnace is of small diameter, and so it was found possible to avoid the hood by applying a very high velocity air curtain immediately over the furnace.

In this instance the curtain is not a jet, as used on the dressing-bench, but is provided by suction fans. The exhaust appliances are below floor level and offer no restriction to the process work. The amount of air handled has been reduced so that the heat loss from the building is smaller and the fumes have been controlled.

Conveyor belts dealing with fuming moulds are often passed through an exhausted tunnel, which may be of considerable length. Large volumes of air may be needed to exhaust these tunnels, so efforts have been made in Sweden to supply some of this air direct from outside in order to reduce heat loss in the room. These efforts have been so successful that in certain instances more than half the ventilating air is never heated.

Conclusion

It is impossible, in a general survey, to discuss in detail any single feature of the diverse and complicated devices used to suppress dust. If dust suppression is rightly approached, it is not easy to discuss more than one industry, although it is obvious that if dust were completely controlled in one

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industry, a proper understanding of the scheme would offer many suggestions to other industries.

For these reasons some features of dust suppression have been observed with a view to suggesting practical aspects essential to ultimate success.

Examination of many plants leads to the conclusion that the first necessity is a more liberal approach to the whole matter. It is essential that all available methods should be examined, and that the final scheme should represent an integration of every available resource.

In particular, a practical outlook demands that local exhaust ventilation should not be regarded as the only way of dust suppression. It will doubtless have to be applied in many cases, and it will continue to serve over a wide field. Nevertheless, greater efficiency will be obtained, as it is progressively embodied in plans which incorporate other ideas.

So far as local exhaust ventilation is concerned, there is still a great need for careful study of the aerodynamic conditions at the entrance to hoods, and the manner in which the mechanics of dust generation influences these conditions. Instances of recent practical work have been given to illustrate the value of empirical development, because it appears, that calculations of air flow may not necessarily indicate the efficiency of dust control.

Industrial Health

—From page 60

do not fade in the winter, and areas of dilated capillaries in the skin surface. The thing which is of most clinical importance, of course, is the tar wart since this is very closely related to the tar cancer. Of these 241 men, 66 had had one or more tar warts. The earliest wart developed after 11 months of exposure and the longest exposure before the development of a tar wart was 41 years. Twenty-six of the men had had only one wart and the others had had varying numbers up to 63 warts on one individual with 26 years' exposure.

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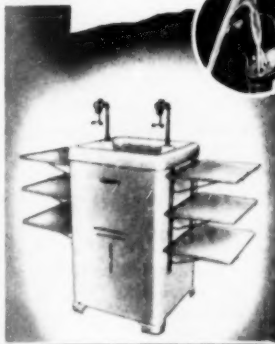
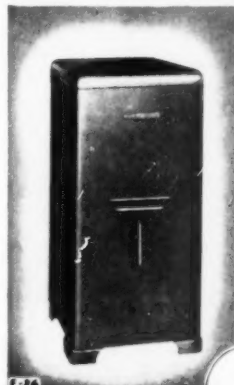
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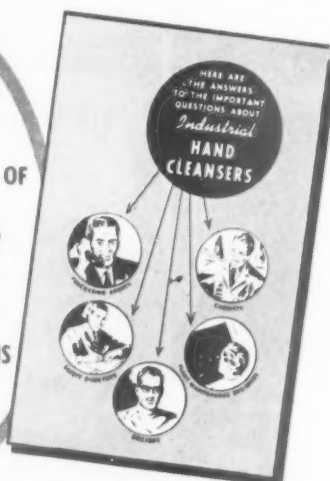
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warts appeared on the head and neck and 23 per cent on the forearm and hand. 1.7 per cent appeared on the scrotum and 2/10ths per cent elsewhere on the body. No tar wart occurred on the palm of the hand.

In examining these men who had had tar warts, a note was made of the hair color to check the prevalent idea that fair-haired men are more prone to tar warts than are dark-haired men. Of the whole 241 men, 131 were fair-haired and 110 were dark-haired. Among the men who had tar warts, 33 were fair and 33 were dark. Of the 175 who had not had tar warts, 98 were fair and 77 were dark. This does not indicate any real connection between fair hair and susceptibility to tar warts. In order to check the thing further, the unaffected men were paired with affected men as to hair color and the date of beginning exposure. Fifty-two of the affected men and fifty-two unaffected men were successfully paired for date of beginning exposure and age at first exposure. Of these 52 individuals, 25 in the affected group were fair haired and 27 dark haired. In the unaffected group, 23 were fair haired and 29 were dark haired.

Questioning of the men in these two paired groups gave indication that the men who were affected by tar warts were also considerably more susceptible to acute tar erythema than were the unaffected group. It was also observed that what has been called the "chronic tar skin" does not necessarily precede the development of tar warts or of tar cancers.

Human Maintenance

—From page 33

get on the ball? All they did was give me another chance, and give me another chance and now they want to fire me."

When a machine fails to meet the demands upon it, the foreman does not say the machine is vicious or insubordinate or lazy or disloyal. He does not fire the machine nor discipline it. He orders it taken apart to see why it doesn't work properly. The machine is re-

paired by the maintenance crew and put back into working order as soon as possible.

Why don't we treat men who break down in much the same way? Why shouldn't a man who is failing, or slowing up in his work, be sent to the industrial nurse, or the plant doctor or psychiatrist, where he can be taken apart so to speak, to find out what is wrong and correct it as quickly as possible?²³

If you probe further into the cause of an accident and ask why a man acted so foolishly or so carelessly you will usually find that he was suffering from some emotional disturbance. Perhaps he had been quarreling with his wife. Maybe he had just had a "run in" with the boss. Maybe he had a sick child at home. Maybe his wife had left him. Such things prey upon a man's mind and distract his attention.

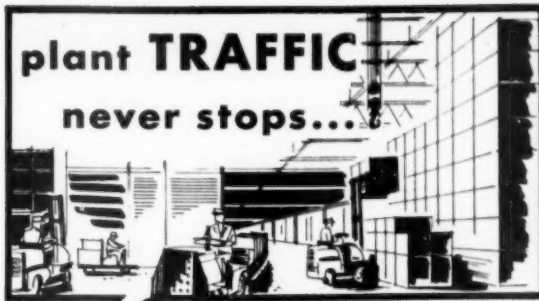
You cannot separate a man's home life from his work. He brings his worries to work with him. His accident record is definitely related to his emotional and physical health. If you are going to get at the basic cause of accidents, human failures, you have to call upon the knowledge and skill of the human maintenance crew, the doctors, and nurses who are practicing industrial medicine.

A safety man can no more do a complete job of accident prevention in industry without a medical service than a trouble shooter can work without the support of a maintenance crew.

Accident prevention and maintenance of maximum production depend upon many things, all of which in the end, must rely upon the dependability and durability of the human element. We cannot, therefore, afford to ignore the health and welfare of our workmen.

You men who are engineers know how carefully a new machine is selected to do a job. The offerings of many companies are studied. Inquiry is made into structural materials, their strength, their ability to stand stress, strain, and temperature changes. Machine precision and maneuverability are investigated. The productive capacity and limitations are studied,

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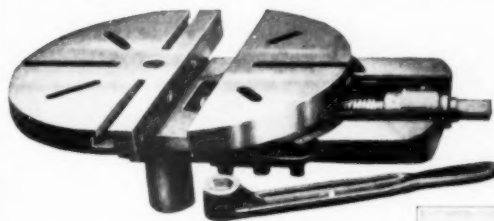
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and the normal life span is estimated. Isn't it just as sensible to know the physical and mental health of employees when they are being hired? Isn't it important to know something about their capacity and durability?

There is no better way of getting this information than through a good pre-employment physical examination, carefully done by a competent physician. He can estimate the workman's physical and mental capacity and assist personnel in the applicant's proper placement in industry. You safety engineers, and you who have responsibility of management, should realize that proper placement of an employee is the first step in accident prevention.

There are many ways in which a medical service can be of great value to industry. But for a health service to serve industry successfully it must meet four basic essentials.

1. *It must have the whole-hearted support of management.*

This may seem fairly obvious but many industrialists think they are giving full support when actually they are supporting only a part of the program. Full support involves a comprehensive understanding of the scope and significance of medicine in industry and I fear that too often management is not well informed on this subject.

2. *The doctors and nurses must be interested in developing a real industrial health program.*

Success in industrial health practice depends fundamentally on a sound knowledge of industrial medicine, but it involves more than that. It means wanting to do the kind of work necessary. It calls for vision and enthusiasm, and devotion to an ideal, which cannot be supplied by a doctor or nurse who regards a job in industry as only a stopping place while reaching for something else.

3. *The service must come into the plant.*

Perhaps some of you have visualized a health service as a first aid station, staffed by a nurse or someone else in uniform, who does nothing but first aid, and an outside doctor who obligingly takes care of all the casualties which the nurse sends to him.

Such a service is good as far as it goes but it cannot be compared to a service where the doctor comes regularly to the plant and gives an in-plant service.

4. *The medical service must be directed toward the benefit of the employee.*³

The employee must be treated as an individual and given all the consideration of a private patient. To maintain him in good health is the purpose of health maintenance. The doctor in industry is not there primarily to protect the company, but rather to help the workman to make the most of himself. It is a natural result that the company is better off when its individual workmen are healthy and happy.

Much of the activity of a good in-plant health service is devoted to preventive work, and in this respect it is a close ally of the safety department. Just as a safety director must spend part of his time making plant inspections, just so a doctor and a nurse must devote a lot of their time to plant tours. This is not a duplication of safety inspection work but a supporting activity.

Medical inspections serve, in part, a different purpose. By frequent visits to the plant the doctor becomes familiar with the jobs of the workmen. He learns the stresses and strains to which they are subjected. He becomes familiar with their exposure to dusts, fumes, gases, vapors, heat and cold, intense light, ultra-violet light, radiant energy, etc. All of this knowledge assists him in making a diagnosis and interpreting a workman's complaints.

Furthermore, the doctor's and nurse's presence in the plant makes the workmen conscious of the company's concern for their health and thereby greatly improves morale. The value of a good health service shows up also in more tangible ways such as reduction in absenteeism, reduction in labor turnover, reduction in compensation insurance premiums, reduction in accidents, and so on.

One of the specific functions of a doctor or nurse when making plant inspections is to look for health hazards such as dust exposures which might lead to sili-

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costs, toxic hazards such as lead dusts and fumes which might cause lead poisoning, solvent vapors such as carbon tetrachloride, and gases such as carbon monoxide which might cause poisoning.

A doctor or nurse when making a plant inspection does not pretend to be able to tell by looking at, or smelling of, an atmospheric condition whether it is dangerous or not. He does, however, know where to get help. He knows that the State Health Department maintains a staff of experts, with special testing equipment, to handle just such a problem. He does not hesitate to call for their assistance because he knows the study will be carefully conducted without prejudice and without expense to the company. He knows that if a dangerous condition is proved to be present that a satisfactory solution can be found.

Maintenance of employee health is vital to industry. A good program of accident prevention is of utmost importance but it can go so far and no further, because ultimately it is halted by the barrier of human failure which in turn is rooted in ill health. The science of medicine in recent years has made huge strides in the diagnosis and treatment of disease including better understanding of the working of the mind. The progress made in the preventive fields is also outstanding. It now remains for industry to apply the arts and skills of medical science in practical human maintenance for the benefit of their employees, themselves, and the nation.

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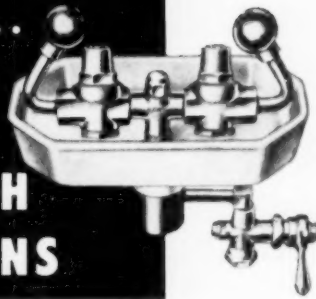
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Write for samples and prices.

Associated BAG & APRON CO.

2650 W. Belden Ave., Chicago 47, Ill.
phone: ALbany 2-7121

Chain of Error

—From page 37

down and explained that I didn't hate mommy but loved her very much. Sue and I tried to reconstruct the conversation that produced the misunderstanding in the boy's mind.

Sue had said, first, "Sally Brown was over this afternoon."

I, half hearing, said, "What was she after?"

Sue, not bothering to answer, said, "We ought to have a picnic this spring. The Browns were good fun last fall out at the lake."

I said, "If Brown sent her over after the rake, I wish he'd return that spade first. That sweet southern accent is nice, but I need the spade."

Sue said, "They are southerners, aren't they. Reminds me. I saw a new recipe for hominy the other day."

"I hate hominy," I declared firmly—and at this my son's wail of sorrow interrupted, since he understood me as saying "I hate mommy."

So, apparently, the problem of communicating ideas is a little larger than the purely industrial and safety applications.

Green Cross News

—From page 48

chapter appraisal plan. Those in attendance were Chairman Walter Ladd, St. Joseph, Mo.; J. James Ashton, Wilmington; Harry H. Brainerd, Pittsburgh; George M. Burns, Kansas City; Walter L. Fox, Syracuse; Estel Hack, Louisville; H. G. J. Hays, Cleveland; W. Russell Hicks, Hamilton, O.; Dan Hollingsworth, Oklahoma City; Joseph M. Kaplan, Los Angeles; Iver C. Larson, San Francisco; Robert B. Leopold, Atlanta; Harold F. Lillie, Lansing, Mich.; with Clinton W. Dreyer, Oakland, and Kenneth R. Miller, Cincinnati as guests.

Syracuse Industrial Series

Two classes in industrial safety engineering were conducted in February and March in Syracuse, N. Y., sponsored by the Safety Council of the Syracuse Chamber of Commerce. One of these was

held at University College for Industrial Personnel and the other was conducted for engineering students in the College of Applied Science. There has been a steady decline in the number of industrial casualties caused by accidents in the Syracuse area during recent years.

Large Attendance in Philadelphia

The 19th Annual Philadelphia Regional Safety and Fire Conference and Exhibit held on March 3 and 4 was the most successful ever sponsored by the Philadelphia Safety Council. More than 4,000 delegates attended the Conference. There were 27 cooperating agencies and a total of 57 exhibits were on display. J. Mark Kirchgasser, vice president of the Central Penn National Bank, was general chairman of the Conference Executive Committee.

Lansing Industrial Dinner

One hundred and fifty executives from industries in the Lansing area attended the annual Industrial Division dinner of the Lansing Safety Council, held in that city Tuesday evening, March 31. Charles F. Alexander, manager of the NSC Industrial Division spoke on the subject "Tain't Necessarily So," a talk designed to clear up some of the fallacies existing in industrial accident prevention. Industrial safety awards were presented to twelve large plants in the Lansing area, including Fisher Body, Oldsmobile, Reo Motors and Motor Wheel Corporation.

Safety Series for Foremen

Four phases of industrial accident prevention were covered in the Foremen's Safety Institute, held at the Fairmount Hotel, Jersey City on March 4, sponsored by the New Jersey State Safety Council, Inc., and the Hudson County Safety Council. The meeting was well attended. The course was planned to prevent accidents before they occur; to outline measures necessary to prevent recurrence of accidents, and to help foremen better understand their safety problems. Highlighting the session were talks on the legal aspects of safety, acci-

dent and production costs, accident investigation and methods of conducting a successful safety meeting. Casey Gans of Esso Standard Oil Company, Bayonne, was chairman of the program committee.

Ralph W. Robinson, Jr.

Ralph W. Robinson, Jr., only son of Ralph W. Robinson, Senior Consultant, Field Organization, N.S.C., passed away suddenly at his home in San Francisco on Monday, March 16, following a cerebral hemorrhage. Mr. Robinson was 37 years of age at the time of his death, married and had two children, aged 5 and 12. He was a well known newspaper man and had many friends in the journalistic group throughout San Francisco and the Bay area. Mr. and Mrs. Ralph Robinson, Sr., left Chicago at once for San Francisco to attend the services.

New High in Milwaukee Attendance

The 1953 session of the Milwaukee foremen's safety school sponsored by the Safety Division of the Milwaukee Association of Commerce, reached a new high in attendance at the first of three sessions on April 1. The total registration for this year's series was 11,700, an increase of almost 200 registrants over the all-time high of 1952. The programs are scheduled for Wednesday evenings on April 1, April 22, and May 27. The closing session will feature a Memorial Day pageant "Safety Through Harmony." Eight one-hour sectional meetings precede the general meeting at each session.

Home-Made Display

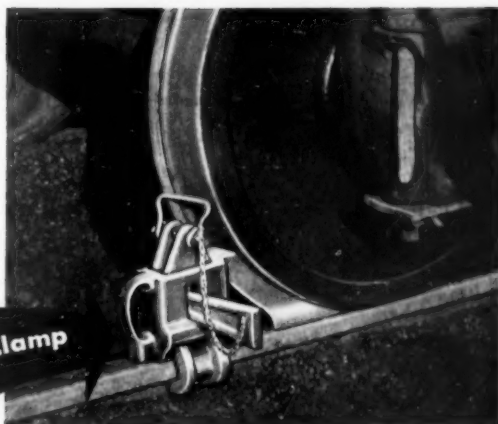
A one day fire school sponsored by the Industrial Fire Prevention Committee of the Safety Council of the Dayton Chamber of Commerce, will be held at Frigidaire Recreation Park on June 5. A novel departure will be the exhibit of "home-made" fire equipment as developed in industrial plants throughout the area, with full explanation as to the use of such equipment, how it is made, its efficiency and other pertinent information.

CAR WHEELS

Can't Slip

WHEN HELD
IN POSITION
WITH THE

M & M Rail Clamp



Reduce danger of costly derailments and injuries with the M & M Rail Clamp. *It will not slip!* Its safe performance has been proven in heaviest industries—steel mills, foundries, shipyards, mines, quarries and cement plants.

The M & M Rail Clamp will give years of safe, economical service. Body is electric furnace steel casting. Lugs and wedges are highest grade drop forgings. Simple construction saves time in positioning and moving up. Order an M & M Rail Clamp now for immediate delivery.

SAFETY FIRST SUPPLY COMPANY

425 MAGEE STREET, PITTSBURGH 19, PENNSYLVANIA

I. D. U.

Protection Against

POISON OAK and POISON IVY

For more than a decade IDU Skin Lotion has been giving outdoor workers, linemen, utilities workers, gardeners and foresters the protection they need from poison ivy and poison oak.

These two spring and summertime hazards to health and efficiency may soon become troublesome. Be prepared!

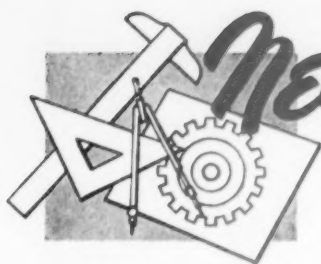
Don't let these irritating conditions develop—use IDU for their prevention.

Order Now

Available at the following prices: 4 oz. bottles, \$6.00 a doz.; 8 oz. bottles, \$10.00 a doz.; 1 pint bottles, \$16.00 a doz.

Send for a free sample on official company stationery today

I.D.U. PRODUCTS CO., WAUSAU, WIS.



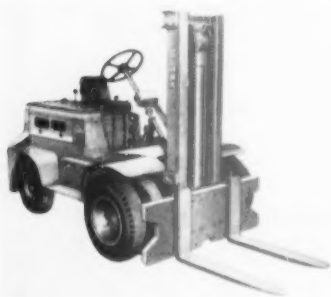
New safety equipment for industry

Manufacturers are invited to send in announcements of new products, or improved special features. Only items which can be considered as "news" to our readers will be published.

New 3-Speed Transmission

A new three-speed transmission and a new-style fork mounting plate assembly has been incorporated in an improved Yardlift-60 fork truck, according to the Clark Equipment Co.

Speed ratios between 1st, 2nd and 3rd gears at gear-changing speeds are less



than with a two-speed transmission. This results in smoother, easier shifting. The use of an intermediate gear permits a lower 1st-gear ratio. The low-speed gear in the new transmission has doubled the power of the Yardlift-60 enabling it to climb a 24 per cent grade under full load.

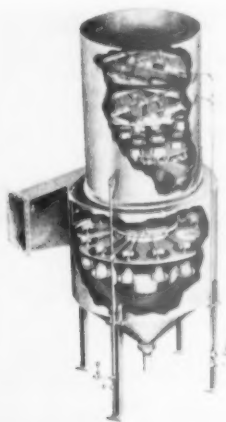
The new fork mounting is approved by the Industrial Truck Association and for further information, write:

Clark Equipment Co., Industrial Truck Division, Battle Creek, Mich.

Item No. 1.

Scrubber Controls Stack Dust

A new system for controlling stack dust has been produced with a wide range of applications and design flexibility.



The system, combining six different principles of dust precipitation, is capable of removing large volumes of dust from the stack gas. The unit is especially adapted to the control of dust from rotary dryers, cyclones, kilns, roasters, mixers and pulverizer exhausts; and from the stacks of asphalt plants, chemical plants, and similar industrial operations.

Less water is required than in ordinary scrubbers. The average draft loss of the Type "LP" scrubber is about two inches of water column. The entire assembly is compact and easily moved. Connections are made to existing duct work without complicated piping. The device is known as the Johnson-March Liquid Precipitator Multiple-Action Scrubber (Type V), and full information is available from:

Johnson-March Corp., 1724 Chestnut St., Philadelphia, Pa.

Item No. 2.

Gas Detector

A new "MSA Hydrocyanic Acid Gas Detector" is now available. Regular use of this detector protects personnel against unnecessary exposure to toxic concentrations of HCN in manufacture of plastics; fumigation of granaries, hotels, warehouses, institutions and ships in quarantine, and in other applications.

A quick reading is easily made by squeezing the aspirator bulb three times to draw in an adequate air sample. Any HCN present turns to blue the white granules of the reagent in the detector tube, beginning at the end where the air sample enters. The length of travel of this coloration increases with the percentage of HCN in the air. Concentrations from 0 to 50 parts per million may be read on the graduated scale of the detector tube. Complete details on the new instrument are contained in Bulletin No. 0811-1 which is available upon request to:

Mine Safety Appliances Co., Brad-dock, Thomas & Meade Sts., Pittsburgh 8, Pa.

Item No. 3.

Sprinkler Deflector

Featuring a new deflector which departs from previous sprinkler practice by directing no water at the ceiling, Grinnell spray sprinklers introduce a high standard of effectiveness in extinguishing fire and preventing its spread. The new spray sprinklers produce a higher proportion of fine droplets and distribute them in a wide, evenly-filled pattern.

Especially effective against severe fires

in fast-burning materials such as high-piled rubber tires, flammable liquids and materials with flash-fire characteristics, the



new sprinklers employ a new method of attack to extinguish fire and limit its spread. Fast dissipation of heat is accomplished by rapid evaporation of the finer droplets in the new spray. This helps prevent ceilings and other materials near the fire being raised to temperatures at which they would distill off flammable vapors or gases to feed the flames.

The new spray has the approval of Factory Mutual Research Laboratories and is listed by Underwriters' Laboratories, Inc.

Grinnell Co., Inc., 260 W. Exchange St., Providence, R. I.

Item No. 4.

Anti-Fog Liquid

A new anti-fog liquid for use on glass and plastic surfaces where fogging and steaming presents a problem is available.

The product contains no alcohol or glycerine but does contain silicones. Known as Fog-Free, it is packaged in 4-oz. "squeeze-spray" plastic bottles. A drop is all that is necessary on each spectacle lens or a quick spray to larger surfaces. Complete information may be obtained by writing:

Industrial Products Co., 2850 N. Fourth St., Philadelphia 33, Pa.

Item No. 5.



Safety Valve

The new Valco Automatic Shut-Off Safety Valve has been designed to be effective in checking fuel-fed fires, in both

New safety equipment for industry

Further information on these new products and equipment may be obtained by writing direct to the manufacturer or to National Safety News. Accompanying coupon is for your convenience.



residential and industrial buildings. The valve is a quick-closing type that is normally held in an open position by an Underwriter's and Factory Mutual approved actuating head that operates like a standard sprinkler head. At the specified temperature, the head opens and releases tension on a heavy, stainless steel spring, which closes the valve in a fraction of a second. The valve is explosion proof. In case debris or blast knocks off the head, the valve will immediately close to prevent fire or secondary explosions.

The Valco valve is installed just like any other valve, no special tools or techniques being required. It will operate in any position, including upside down. Full details are available from:

Valco, Inc., 1410 West St., Cincinnati 15, Ohio.

Item No. 6.

Toilet Tissue Poster-Cabinets

Morgan Paper Co. introduces new toilet tissue poster-cabinets with replaceable posters printed in fluorescent colors. These



replaceable posters are frequently re-designed and issued to poster-cabinet placements, at no cost.

Both Morgan Unity tissue size and Bi-Fold tissue size poster-cabinets are fabricated of heavy gauge steel with riveted poster frames. Cabinets have lock and are easily mounted. Full details are available from:

Morgan Paper Co., Inc., Lititz, Pa.

Item No. 7.

Floor Cleaning Compound

A new finely ground cellulose fibre material with exceptionally high absorbency, called Cottentex, is now available as a floor sweeping compound. It is claimed this compound absorbs more than 8 times its own weight, making it suited for absorbing oil, greases, battery acids, gasoline, or any liquid. Absorbs immediately, and when swept up leaves floor clean and dry. The product is soft and non-corrosive, and will not harm wood, concrete, terrazzo or painted floors. It does not combine with oil or grease to form a compound. A free sample is available by writing:

Cottentex Mfg. Co., Dept. 115, 405 E. Wells St., Milwaukee, Wis.

Item No. 8.

Lamp Reflector

A new type of light reflector that screws right into any standard light socket has been developed by Abolite Lighting Division, The Jones Metal Products Co. This



Jiffylite has a two-piece plug and socket; lamp screws into the reflector which in turn screws into the light socket. No tools needed for installation.

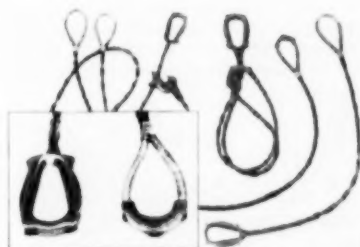
The inside surface of Jiffylite is finished in glistening titanium-white porcelain enamel for maximum light reflection. The outside surface is attractively finished in cream-colored porcelain. Complete information is available from the manufacturer.

Abolite Lighting Division, The Jones Metal Products Co., West Lafayette, Ohio.

Item No. 9.

Braided Sling Fittings

A new 8-part braided sling, introduced by A. Leschen & Sons Rope Co., features a new type of reusable thimble fitting. These Pin-Lock thimbles are attached by pins and are readily removable for reuse. The Red-Strand 8-part braided sling it-



self is a new Leschen product, introduced after a long period of development work and job-testing. Complete information is available from:

A. Leschen & Sons Rope Co., St. Louis 12, Mo.

Item No. 10.

Stair-Climber Hand Truck

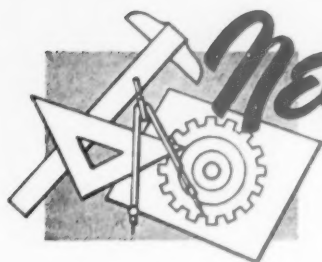
To ease ascent and descent of stairs, curbs, and multi-level passageways, the "E-Z Climb" two-wheel utility hand truck has been developed.

The two aluminum rocker shoes act like an extra pair of wheels in keeping the load supported until the wheels reach the next level. At this point the wheels engage the new level after which the complete cycle is repeated until the final elevation is reached. The cycle is the same for both up and down travel. After each operation the rocker arms return to their neutral position by virtue of being permanently located on a spring loaded



double-action axle. This device keeps the load on a constant line for friction-free travel rather than incur drag or sliding friction as is the case on conventional glides for this purpose.

The trucks are now available with both steel and aluminum frames in a variety



New safety equipment for industry

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of wheel diameters featuring both semi-pneumatic and pneumatic tires. Write the manufacturer for complete details.

Automatic Bending Co., Harvey, Ill.
Item No. 11.

Anti-Fog

A new anti-fog and lens cleaning cloth has been developed for use on glass or plastic surfaces to prevent formation of fog or steam on eye-glasses, windshields, windows, mirrors, etc. It is claimed by simply wiping the surface to be treated with the impregnated No-Mist cloth, the object is both cleaned and fog-proofed in one operation.

Carol Chemical Products Corp., 368 E. 45th St., Brooklyn 3, N. Y.
Item No. 12.

Thresholds

Special thresholds that permit easy installation with various types of floor hinges are now available in the complete line of abrasive cast thresholds made by Wooster Products, Inc.

Shown in the illustration is the Wooster 115-SA. Additional safety and wear are



features of the aluminum oxide grits integrally cast into the surface. The thresholds are supplied in aluminum and iron, also bronze and nickel when permitted. Write:

Wooster Products, Inc., Dept. A., Wooster, Ohio.
Item No. 13.

Hand Soap

The new Calgon hand soap, containing a new water softening ingredient, cleans rapidly and safely scrubs soiled skin. The product is powdered, non-packing, flows freely and will not plug or damage drains or pipes. It feeds easily from any conventional dispenser. The manufacturer is also introducing an attractively designed dispenser as a companion product,

to feed the soap in small amounts, enough for the average hand washing.



Calgon hand soap is to be offered in 5-pound packages, six to a case, and in 200-pound drums. Further details are available on request to the manufacturer:

Calgon, Inc., Hagan Bldg., Pittsburgh 30, Pa.
Item No. 14.

Carbon Dioxide Extinguishers

A new line of portable carbon dioxide fire extinguishers has been announced by the Fyre-Freez Division of Walter Kidde & Co., Inc. The new portables feature squeeze-type valves and come in five sizes from 2½ to 20 pound models.

The new portables use Kidde lightweight cylinders. The squeeze-type valve requires only normal hand pressure to



actuate the extinguisher after the safety pin has been removed. The extinguishers have been approved by Underwriters'

Laboratories and the Factory Mutual Laboratories.

Walter Kidde & Co., Inc., 1020 Main St., Belleville, N. J.
Item No. 15.

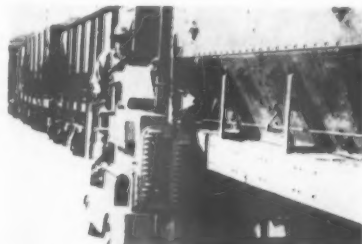
Slip-On Guard for Fluorescent Lamps

A new, ingenious slip-on guard to prevent fluorescent lamps from falling from their sockets is now available. Called the Gets-A-Lite guard and guide, this device is constructed of spring wire and formed into the shape of a "U," with the sides 2¼" long, terminating into outward-pointing prongs, and the other end containing a small rectangle set at right angle. In use, the guards are merely slipped over the sockets at each end of the fixture and left there. No upkeep or adjusting is necessary. Write the manufacturer for full details.

The Gets-A-Lite Co., 3865 N. Milwaukee Ave., Chicago 41.
Item No. 16.

Wrench Truck

Here is a unique truck that avoids excessive physical exertion in opening and closing bottom gates in hopper cars. With this special-purpose vehicle, the power that is normally channeled into raising and lowering palletized and skidded



loads is shunted into the elimination of the job of door manipulation.

Formerly, at the vessel-loading docks in the Lake Superior district, it was necessary for several crews of two men each to use wrenches 4 feet long, weighing 55 lbs., to open and close the gates. With this special truck, one man can do the job safely and easily in a fraction of the time formerly required. The wrench on the truck is moved horizontally to engage the opening and closing mechanism on the rail car. The wrench is then powered to crank the gates open or closed. Manufacturer will send details upon request.

Elwell-Parker Electric Co., 4205 St. Clair Ave., Cleveland 3, Ohio.
Item No. 17.

New safety equipment for industry

Further information on these new products and equipment may be obtained by writing direct to the manufacturer or to National Safety News. Accompanying coupon is for your convenience.



Conductive Wax

A new conductive wax, compounded to reduce the dangers of dust or vapor explosions resulting from static electricity, is announced by The Gerson-Stewart Corp.

Known as Swiftsheen Conductive, this wax was developed for use in danger areas of hospitals, ordnance plants, arsenals, laboratories and industry. The wax will not darken nor stain floor surfaces. Manufacturer states tests prove that it meets government safety requirements for a conductive non-sparking floor surface. For further data write:

The Gerson-Stewart Corp., Lisbon Rd., Cleveland 4, Ohio.

Item No. 18.

Portelvalor

Installed in the basement, this long legged Portelvalor increases production of a ground floor paper sheeting machine by providing the means of handling six foot stacks of sheeted paper at the delivery end of the machine.

Operated by a 2 h.p. motor, with reversing magnetic starter, limit switch, and overload protection, the table is push-button operated for a total vertical travel



of 78 inches. The table size is 48" by 84". Load capacity is three tons.

In operation, a skid is positioned on the platform of the Portelvalor and the platform raised to maximum height, 30" above floor level. As sheets are received on the skid, the platform is lowered until it reaches its extreme low position, 48" below floor level, and then returned to floor level where a fork truck removes the stack to storage.

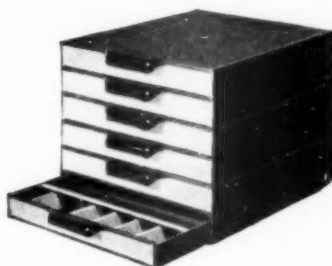
Details of the exclusive mechanical lift principle and other modern refinements of construction and operation, are contained in the manufacturer's Bulletin P-A which is available by writing:

The Hamilton Tool Co., Hamilton, Ohio.

Item No. 19.

Small Parts Storage Cabinet

The "Little Gem" is a steel storage cabinet which the manufacturer claims will provide quicker access to a wider variety of tiny parts than anything yet conceived. The cabinet is designed for



use either individually, in stacks, under counters, or on shelving.

The drawer of the cabinet measures only 11" x 11" x 1 1/4". It accommodates up to 28 adjustable compartments enclosed on all four sides and bottom. Tiny parts will not slip out, become damaged and jam drawer. Front of compartments is curved for easy withdrawal of parts. Overhang at rear prevents shuffling of items when drawer is jerked open or slammed shut. Label holder identifies each compartment. The manufacturer is:

Equipto Division, Aurora Equipment Co., 422 Cleveland Ave., Aurora, Ill.

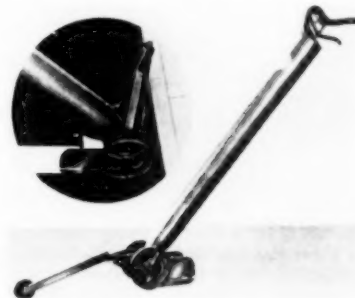
Item No. 20.

Line Marker

Latest innovation developed for the Florline Marking Machine is a third retractable wheel which acts as a line guide 18 inches forward of the carriage. The three-wheeled suspension makes operation easier and the advance guide wheel keeps the machine on the track long before line marking begins.

The arm on the guide wheel automatically folds back when coming to a curb or wall, permitting the machine to continue right up to the barrier with no interference. Curved lines are made by

turning the machine in the desired direction and steering the guide wheel to the



right or left. An important feature is the ability to raise the handle of the machine and lift the brush to roll the Florline on three wheels to other areas without lifting the entire machine.

The Florline makes painted lines at walking speed. It's built of heavy gauge metal, streamlined to operate around and close to machinery and stock. Get full details by writing:

H. C. Sweet Co., 24396 West 7 Mile Road, Detroit 19, Mich.

Item No. 21.

Latch for Storage Coolers

Possibility of a person being entrapped in a refrigerated cooler is avoided when the K 55 Safeguard Latch is used, the manufacturer announces. The design of this Kason Latch provides pilfer-proof padlocking from the outside, and at the same time assures exit from inside the cooler, even when it is padlocked. This ingenious latch is as simple to install as any regular cooler door latch, and at the same time provides modern design. Also available are similar latches with safety devices for use on fast-freeze and super-freezer doors. Write the manufacturer:

Kason Hardware Corp., 127 Wallabout St., Brooklyn 6, N. Y.

Item No. 22.

Magnifying Spectacles

Critical inspection which requires magnification, or close tolerance work that ordinarily strains the eyes, is aided by the operator wearing magnifying spectacles that leave both hands free. Employing the same optical system as a pair of binoculars or a telescope, these spectacles afford 2X magnification with exceptional clarity and an unusually large field. An area as large as a magazine page can be

New safety equipment for industry

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viewed at once, permitting fast, accurate inspection or close tolerance assembly. Also, the viewing field is observed at a normal reading distance.



These imported French telescopic loupe glasses weigh little more than ordinary spectacles and can be folded down and carried in their case. They can also be comfortably worn over regular glasses. Write:

Armco Mercantile Co., (U. S. Importers), 221 N. La Salle St., Chicago 1.

Item No. 21.

Magnetic Sweeper

A new magnetic road sweeper, designed to remove tacks, nails and other tramp iron from highways, parking lots, factory aisles and airports, has been developed. Called the Super-Sweeper, it can be pushed, pulled or suspended, and is made in three strengths and four widths: 24", 36", 48" and 60" sizes.

The handle is of tubular steel which is easily removed for storage and transportation. The sweeper's Alnico V magnetic



element will snap up and hold tramp iron in its path. A loop at the end of the steel handle can be attached to almost any trailer hitch. By removing the wheels and handle, and attaching with built-in eyebolts, the sweeper is quickly adapted

for use on industrial lift trucks. It has a square aluminum cover, the ends of which are closed with aluminum castings.

Eriez Mfg. Co., Erie, Pa.

Item No. 24.

Loading Dock Bumper

These rubber loading-dock bumpers absorb the shock when truck and dock come together and are made in sizes which make them applicable to any installation. Manufacturer claims that with these new



bumpers replacement of dock timbers is greatly reduced and danger to truck bodies and castings is done away with. Complete information is available from:

Durable Mat Co., Norwalk, Ohio.

Item No. 25.

Scale Solvent

A new solvent which cleans, sterilizes and deodorizes in one operation is now available. The solvent removes recurring stains and incrustations where germs may lodge, reducing the cause of obnoxious odors.

In addition to its use in toilet rooms, it is also suitable for hospital sterilizers, dishwashing machines, glass spray machines, skylights, and on floors of marble, tile, terrazzo, concrete, and in swimming pools and showers.

The product is known as the Patrick Scale-Solvent and full information is available from the manufacturer.

Leo R. Leary, 237 Columbus Ave., Buffalo 20, N. Y.

Item No. 26.



Fire Extinguisher

The H104X, a new 1½-quart pump-type fire extinguisher, is approved by Underwriters' Laboratories and Factory Mutual, I.C.C. and other Federal and State authorities.



It is claimed the extinguisher will discharge a 25 to 30 foot stream of carbon tetrachloride, suitable for use on all types of fires, including electrical. The extinguisher comes with its own mounting bracket for installation on trucks, tractors or buses. Shipping weight is 10 lbs. with fluid. For further details write:

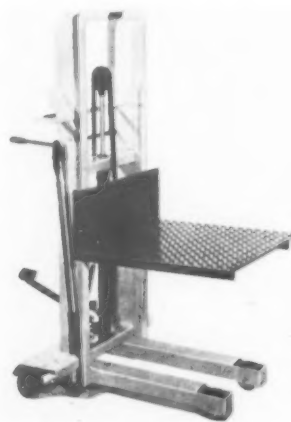
Yankee Metal Products Corp., Norwalk, Conn.

Item No. 27.

Hydraulic Lifts

Several new models of Big Joe hydraulic lifts for either manual or battery operation are now being introduced. Among the many functional improvements that increase the ease of handling bulkier loads with greater safety are the following:

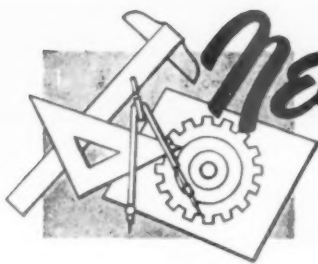
A straddle type base that can be furnished in a range of widths up to 50"; forks, adjustable in any position, to



widths that provide the best support for the load, are furnished in lengths from 25" to 36" and load at floor level. Swivel casters at rear and roller bearing wheels in front afford maximum maneuverability in minimum space. For further information write:

Big Joe Manufacturing Co., 900 W. Jackson Blvd., Chicago 7.

Item No. 28.

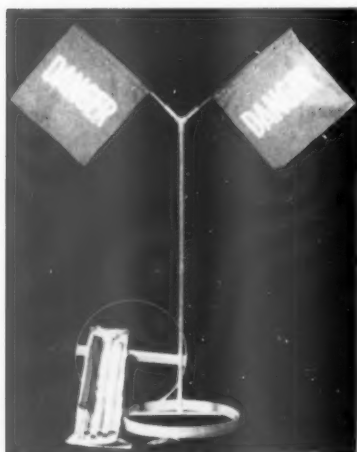


New safety equipment for industry

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Portable Flag Standard

A new portable flag standard, incorporating design features suggested by "on-the-job" highway workers and repair crews, is now available. Chief features of this standard are Y-type flag holder for two red danger flags, at eye level to approaching drivers; upright of standard



steel pipe fittings with hole for fusee flare; sturdy round base will not tip. If standard is hit, upright shears off at base and can be re-threaded or replaced. Entire unit, yellow for high visibility, breaks down for packing in small canvas bag, and can be assembled or taken apart without tools.

A catalog-sheet describing the standard may be obtained by writing:

Charleston Rubber Co., Stark Industrial Park, Charleston, S. C.
Item No. 29.

News Items

Two new district offices have been established by Mine Safety Appliances Co., Pittsburgh. At Uniontown, Pa., H. R. Johnson, district manager, has his office at 303 Second National Bank Building.

Sales engineers stationed at Pittsburgh, Pa., St. Clairsville, Ohio, and Clarksburg and Fairmont, W. Va., and service engineers at Pittsburgh and Washington, Pa., and Buckhannon and Fairmont, W. Va., report to the new Uniontown district office. In charge of the new Johnstown, Pa., district office at 610 Johnstown Bank & Trust Company Building is V. A. Stanton, district manager.

Multi-Clean Products, Inc., announces the purchase of the Floor Sanding Machine Division of the Lincoln-Schlueter Floor Machinery Company, Chicago. Manufacturing operations are being transferred to the Multi-Clean factory in Saint Paul, Minn.

Another announcement by Multi-Clean Products, is the purchase of the manufacturing facilities of the Industrial Vacuum Cleaner Department of the General Electric Company. The transaction includes all production dies, patterns, fixtures, and inventory.

A new factory is under construction in Saint Paul, where production of industrial vacuum cleaners will begin at an early date. While the construction of the various models will be the same, they will be distributed under a new trade name.

* * *

A. A. Breuer, president of Breuer Electric Mfg. Co., Chicago, has announced the company's acquisition of additional plant facilities. The company has purchased a plant of 8,000 square feet adjoining the present plant at 5100 N. Ravenswood Ave.

The new plant will be used to expand production of the company's line of vacuum cleaners, portable electric blowers and floor scrubbing machines.

* * *



Dan Stearns has been appointed manager of the newly-created Midwestern Region of Clark Equipment Co., of Buchanan, Battle Creek and Jackson, Mich. His headquarters in Chicago will be 310 S. Michigan Ave.

Assisting Mr. Stearns will be Glen R. Johnson, who for the past six years has been one of Clark's account representa-

tives. Mr. Johnson has been associated with Clark since his graduation from the Ohio State University. He has made a specialty of materials handling as it concerns food processors, grocery and terminal warehousing.

Mr. Stearns, who was southern representative for the American Hospital Supply



Corp. for five years, and then Firestone district manager in Indiana for five years before joining Clark, was for four years the Chicago representative and for the past year has been manager of Clark's North Central Region. Mr. Stearns succeeds A. G. Morrison who has become the Clark dealer in a new sales territory comprising roughly the Western half of Michigan.

* * *

The Diversey Corp., Chicago, has expanded its activities with the purchase of the KILLS 'Em Chemical Co., Ltd., of Honolulu, Hawaii. The new subsidiary is engaged primarily in the manufacturing of disinfectants and insecticides. It also operates a large service organization in the Islands for the control of termites.

Diversey is a producer of sanitation chemicals for the food industries; industrial oil absorbents; cleaners used in preparing metal surfaces for finishing operations, industrial clays and insecticides.

* * *

A. C. Horn Co., Inc., Long Island City 1, N. Y., supplied over 40,000 gallons of special low temperature Vulcatex Elastic Caulking Compound which was used on the famous "Blue Jay" operation in Greenland at 60 degrees below zero. This operation was only 900 miles from the North Pole. This modern engineering miracle is a full scale year-round bomber base.

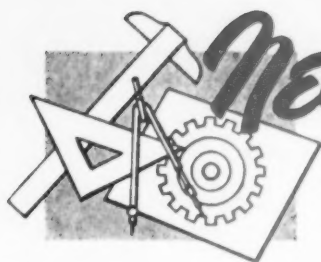
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William A. Schmaltz, sales manager of the Eastern Division of the Hillyard Chemical Company of St. Joseph, Mo., has been appointed national advertising manager for the company. While continuing to serve in his present sales capacity, Mr. Schmaltz assumed his additional duties early this year. He succeeds Jerome V. Hillyard, who is now purchasing agent and assistant to the president, Robert B. Hillyard. Mr. Schmaltz joined the Hillyard Company in 1929. Since then, except for a period from 1943 to 1945, when he served with the U. S. Army Engineers in France, he has worked in every phase of the company's activities.

* * *

To provide better fire protection service for the southwest's rapidly growing industrial establishments and keep pace with the area's over-all growth, Ansul Chemical Co. of Marinette, Wis., is opening new branch offices in Houston, Dallas-Fort Worth and Tulsa areas.

District sales will be supervised by C. H. Armstrong. Virgil Murry will manage the Houston office at 1110 White St.,



New safety equipment for industry

Manufacturers are invited to send in announcements of new products, or improved special features. Only items which can be considered as "news" to our readers will be published.

Houston; Neal Engberg will manage the Dallas-Fort Worth office at 907½ Throckmorton St., Fort Worth; and Roger Allen will manage the Tulsa office. Warehouses will be maintained in Houston and at Kansas City, handling industrial chemicals as well as fire equipment. The area was previously served by a distributor.

At the 34th Annual Meeting of Gro-Cord Rubber Co., Forest Moor, formerly vice-president and general manager, was elected to the presidency and Fred W. Cook, formerly president of the company, was elected chairman of the board.



Mr. Moor has been actively connected with the company for 10 years. A director for the past 8 years, he was previously associated with Mr. Cook in the Autkraft Box Corp. He is a director of the Rubber Heel and Sole Institute and director and treasurer of the Elastic Colloid Research Corp.

Mr. Cook has been associated with the company as an officer and director since its inception. He was treasurer for 20 years prior to his election as president in 1939. He served as president of Autkraft Box Corp. until retirement from active affairs of that company in 1945. He is owner of the Cook Tower office



building and is associated with various Lima enterprises and developments.

The appointments of Carleton P. Adams as advertising manager and Newcombe C. Baker, Jr., as manager, special sales promotion of The Yale Materials Handling Division of The Yale & Towne Manufacturing Co., Philadelphia, have been announced by James A. Shellenberger, director of advertising, publicity and market research.

Mr. Adams was formerly with the Quaker Rubber Corp. Mr. Baker was formerly of Ruthrauff & Ryan, Inc.

Obituary

J. Creighton McMinn of College Park, Ga., regional manager of the Southern Atlantic states for Safety First Products Corp. of Elmsford, N. Y., died of a heart attack on February 20, 1953. Since September, 1948, Mr. McMinn had been associated with the company and was active up to the time of his death. He was well known to many fire departments and industrial accounts throughout that region.

Facts About Elevators

THERE ARE more than 236,812 elevators in the United States today, according to Otis Elevator Company. They carry more than 20 billion passengers yearly, who travel some 500 million miles vertically. (For comparison, passenger totals for other modes of transportation follows: trains, 703

million; street cars, 9 billion; busses, 10 billion; subways, 4 billion.)

In New York City, the world's greatest elevator city, there are nearly 45,000 elevators. Included are 30,000 passenger elevators, which carry 17,500,000 passengers 125,000 miles daily. There are almost as many miles of elevator shafts in the city as there are miles of subway and "L" tracks—which total 1,809 miles—and there are actually people in the city who travel farther vertically than horizontally when going to work.

In the world's tallest structure, the Empire State Building, the total length of all elevator cables (hoist, governor and counterweight) is 119½ miles.

The odds on trains keeping their schedules are 50 to 1; on the bank being wrong about your statement 997 to 3; on your pocket being picked 90,000 to 1; and on an elevator being trapped between floors 999,999 to 1.

Without question, modern elevators produce the safest form of transportation. Injuries run to 1 in 45 million passengers (many of these casualties are not riders, but prospective passengers who somehow find ways of poking their heads in shaftways and are struck by ascending or descending cars.

NATIONAL SAFETY NEWS
425 N. Michigan Ave., Chicago 11, Ill.

MAY, 1953

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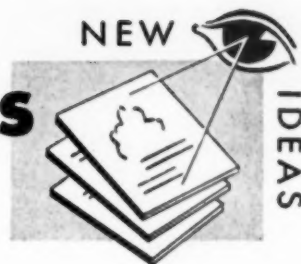
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Trade publications

in the safety field

These trade publications will help you to keep up-to-the-minute on new products and developments in industrial health and safety equipment. They are free and will be sent by manufacturers without obligation to readers of NATIONAL SAFETY NEWS who are responsible for this work. Send in the coupon below checked for the publications you desire. Please make your requests promptly.



1. **Conveyor Belts:** New Catalog illustrates woven wire conveyor belts for the processing of industrial products. Charts, tables and engineering formulae included. Cambridge Wire Cloth Co.

2. **"Voice of Action":** Pamphlet describes the Femco trolleyphone for men at the controls in mines and mills. Words spoken into any one microphone come out of all other speakers. Engineering data included. Farmers Engineering and Manufacturing Co.

3. **"Car Spotters and Car Pullers":** Book No. 2092, describes a complete line of equipment for moving railroad cars and other heavy loads, including both vertical capston and horizontal drum designs. Eighteen single drum car pullers are listed. Link-Belt Co.

4. **Choker Sling Fitting:** Brochure describes company's new wire rope choker sling fitting. The fitting which is suitable for lumber, I-Beams, rods, heavy pipe, etc. Drawings explain how the fitting works. Electroline Co.

5. **"Hoist Phone":** Brochure describes a new frequency-modulated carrier communication system for mine hoists. Designed to maintain two-way conversation between the hoisting engineer and the hoisting cage. The system operates with the cage at any level, as well as in motion. Mine Safety Appliances Co.

6. **"Ampco Weld Products for Resistance Welding":** 24-page catalog gives full information about the complete line of holders, tips, seam welder wheels, seam welder shafts and bushings and flash, butt, barrel and projection welding discs. Reference tables, physical properties, applications included. Ampco Metal, Inc.

7. **Kason Safe Guard Latch:** Pamphlet describes Latch No. K-55, a new safety latch for walk-in doors, and how it is impossible to lock a person, accidentally or intentionally, inside a refrigerator which is equipped

with this latch. Kason Hardware Corp.

8. **Better Maintenance:** A 6-page illustrated folder gives a complete line of maintenance paints for inside and outside use. Products include factory glass cleaner, chain link fence paint, heat resisting interior and exterior aluminum paint, acid and alkali resisting aluminum and black, and many others. Skybryte Co.

9. **"Permanent Non-Electric Model C Plate Magnets":** A 4-page Brochure No. B-603 explains industrial applications of plate magnet separators. Typical installations of these separators, used in processing lines, are illustrated with engineering drawings and photographs. Eriez Manufacturing Co.

10. **Stonehouse Jumbo Danger Tags:** Catalog illustrates danger tags for use on switch boxes, valves, machines and other locations where a temporary, forceful warning is needed. Stonehouse Signs, Inc.

11. **Platform and Fork Trucks and Floor Cranes:** 12-page manual gives operational features, engineering details of manufacturer's platform and fork trucks and floor cranes. Elwell-Parker Electric Co.

12. **"4-Way Safety Plate":** Catalog illustrates and describes 4-way floor plate with raised lug pattern providing firm, anti-slip traction, for use wherever slipping hazards exist on all walkaway surfaces. Inland Steel Co.

13. **"Controlling Costs":** Booklet which is a complete guide to the right scaffolds and ladders for cleaning, painting, electrical work, plant and equipment maintenance, etc. Lists types of jobs, tells you which equipment is used for each. Pictures, ideas on how to cut your off-the-ground maintenance included. Patent Scaffolding Co., Inc.

14. **"On a Shoe Sole What Does 'Made' of Neoprene Mean to You":** Booklet on

Neoprene soles discusses the properties of Neoprene, covers its toughness, chemical resistance, etc. Gives actual case histories of wearing qualities. E. I. du Pont de Nemours & Co., Inc.

15. **Tool Tester:** Bulletin describes the Pow-R-Safe tool tester designed to test the safe working condition of electric hand tools such as drills, screwdrivers, nut-runners, saws, extension cords, grinders, soldering irons. Fendall Co.

16. **Industrial Hand Cleansers:** Pamphlet gives information and answer data to the important questions about industrial hand cleansers. Lightfoot Schultz Co.

17. **Adjustable Ramps for Loading Docks:** Four-page brochure illustrates and describes Adjust-A-Dock and Adjust-A-Truck for loading docks. Contains application photos, engineering drawings, and other data. Rowe Methods, Inc.

18. **Plastic Floor Resurfacer:** Technical data bulletin describes Cryptolite, a new prismatic Crystalline mineral recently added to Swift-Floor. Features of the plastic floor resurfacer is that within 60 seconds heavy loads can truck over it and is able to stand loads up to 50,000 lbs. Monroe Co.

19. **Controlled Humidification:** Bulletin No. 1773 describes and illustrates air controlled and electric controlled humidifiers to eliminate dry air in industries. Tables and capacities included. Armstrong Machine Works.

20. **Power Sweepers:** Illustrated brochure with data on sweeping, describes how to cut maintenance expenses with power sweepers. Wilshire Power Sweeper Co.

21. **Safety Saves:** The title of Clark Equipment's new training film for industrial truck and tractor drivers. The sound movie lasts 30 minutes and shows how to reduce accidents and prevent load damages. Clark Equipment Co.

NATIONAL SAFETY NEWS

425 N. MICHIGAN AVE., CHICAGO 11, ILLINOIS

MAY, 1953

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Work Better** WITH

**HATTIE SNOW
UNIFORMS**
REG. U.S. PAT. OFF.



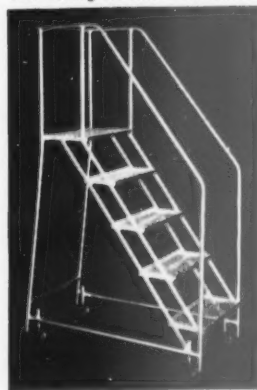
- ★ SLACK SUITS
- ★ COVERALLS
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- ★ JUMPERALLS
- ★ WORK DRESSES
- ★ CAPS

- Serviceable
- Durable
- Washable
- Colorfast
- Sanforized

WRITE for complete information on styles and prices

RANDES Manufacturing Co.
2 CAROLINE ST.
OGDENSBURG, N. Y.

**COTTERMAN
WELDED STEEL SAFETY LADDERS**
For Filing Rooms—Stock Rooms—Vaults



45"—5 Step

New improved design now being made from 1" diam. round furniture tubing.

Mounted on Swivel Brake Casters which allow the ladder to be rolled freely when no one is on it. When you step on the ladder the rubber cushioned legs rest on the floor and prevent rolling.

Made in 7 heights:—18" 2 Steps, 27" 3 Steps, 36" 4 Steps, 45" 5 Steps, 54" 6 Steps, 63" 7 Steps, 72" 8 Steps.

All are made in either 20" or 26" width.

Send for Circular No. 52-N and prices on these ladders and our full line of Wood Rolling Ladders.

Manufactured by

I. D. COTTERMAN

4531 N. Ravenswood Ave. Chicago 40, Ill.

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New, Larger COVER GOGGLES

fit over ALL modern glasses...



• The new series 548 and 549 Cover Goggles by CESCO will fit comfortably over all popular styles of men's or women's glasses. A 20% increase in size over similar goggles permits clearance of even the modern extreme styles of personal glasses.

Newly designed, contoured edges eliminate pressure points on the nose. These curved, wide bearing surfaces also seal against the entrance of flying particles or light flashes. Larger air space within goggle reduces fogging.

Screw-type retaining rings permit quick lens change from front. Standard 50 mm lenses seat flush with rings to deflect flying objects. Chippers style has indirect ventilation through slotted lens rings and direct ventilation through perforated side shields. Welders and dust models have indirect ventilation through side shields.

Simplified buckle arrangement adjusts bridge width easily. Choice of 3 adjustable headbands: elastic, flat rubber, or Comfort King round rubber with no metal slides or buckles.

For a really modern goggle that will fit over a wide variety of glasses there is nothing better than the No. 548 CESCO Cover Goggle. It is "Right...before your eyes!"

**See or write your
CESCO safety equipment distributor
for full details**



New CESCO Cover Goggles fit well over all popular styles of glasses—even over extreme types such as these.

FEATURES



Lightweight, sturdy plastic with contour edges. Weight is well-distributed for comfort and safety.



HEADBANDS

Three types, all fully adjustable—Comfort King round rubber, flat rubber, or elastic.



LENS VENTILATORS

Slots in edges of lens frames and rings are offset to baffle air flow.



SIDE SHIELDS

Baffled type for welders.

Perforated for chipping and grinding.



CHICAGO EYE SHIELD COMPANY • 2306 Warren Boulevard, Chicago 12, Illinois

CESCO FOR SAFETY

OFFICES IN: Atlanta, Birmingham, Boston, Buffalo, Cincinnati, Cleveland, Columbia, Detroit, East Orange, Houston, Kansas City, Knoxville, Little Rock, Los Angeles, Mexico City, D. F., Milwaukee, Montreal, Philadelphia, Pittsburgh, Salt Lake City, San Francisco, Spokane, St. Louis, St. Paul, Toledo, Vancouver



Dust Respirators



**GOOD,
LIGHTWEIGHT,
COMFORTABLE**

In the
"Good Old Summer Time"

A comfortable worker is a better worker! That's why these lightweight (1½ ounce) respirators are particularly welcome when temperatures soar. They do a real protective job and they're economically priced. Your nearest AO Safety Products Representative can supply you. Model numbers are R9100 and R9100T.

Recommended Uses

R9100 Respirator provides protection against pneumoconiosis-producing and nuisance dusts such as borax, carbon, glass, grain, graphite, cement, limestone, gypsum, coke, charcoal, wood, pollen, flour and aluminum.

R9100T Respirator, similar in appearance and construction to the R9100, protects against any toxic dusts not considerably more toxic than lead — such as arsenate of lead, barium, cadmium, and manganese. It also protects against DDT.

QUICK FACTS

Construction: Simple design includes a smooth, rubber face-contacting mask and a corrugated permanent type felt filter, reinforced by a wire frame.

Filter: Corrugated facepiece forms filter, giving large filter area of approximately 22 square inches.

Breathing comfort: Easy to breathe in — non-reversing, low-resistance exhalation valve does not stick, is out of way and easily replaceable.

Wearing comfort: In addition to light weight, comfort features include soft rubber, smooth edges and self-adjusting double headband.

Unobstructed visibility: Compact, fits close to face. May be worn under helmet or with goggles.

Easily cleaned: A vigorous shake, a slap of the hand or a light blast from an air hose removes dust.

Both respirators are approved
by the U. S. Bureau of Mines (R9100 — BM2137;
R9100T — BM2144).

Look to AO for a complete line of safety goggles,
protective clothing and respirators for every
industrial need.



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